

# **American Vegetable Grower**

FEBRUARY • 1960

25 CENTS

**VARIETIES • CULTURE • PACKING • MARKETING**



**Lettuce Grower Profits  
from Planned Planting**

**Today's  
Potato Varieties**

**California's Tomato  
Bargaining Defeat**

**New Look in Plastic Field Greenhouses**



The Collison brothers (left to right), Vincent, Milford and Marvin, talk tires with Firestone representative Everett Bliss.

# "FIRESTONES ARE THE TOUGHEST TIRES WE'VE EVER PUT ON TRACTORS!"

say Vincent, Milford and Marvin Collison, of Collison Bros., Arcadia, Iowa. "Firestones are the toughest tires we've ever used! Our 11 tractors work long hours, cover a lot of ground. Tire trouble is one thing we can do without—and we've never had any trouble with our Firestones! And our Carroll Firestone man, Everett Bliss, gives us service that's really worthwhile!"

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# Firestone

**BETTER RUBBER FROM START TO FINISH**

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# Can Research Pay Its Way?

**Consider the lowly onion and how it grew!**

Groping around inside his jacket to find that shirt pocket, the Vegetable Grower found a folded paper and drew it out.

He had checked off the seed he needed. He had written some prices along the edge.

Back in 1925 the discovery of the first all-female onion plant was made by researchers at Davis, California, and changed the whole history of onion hybridizing. But that mother plant was red. It took twenty years of research to breed out the red and get the yellow



Examining onions grown from coated seed with Germain's Field Representative Earl Schoenberg (right) is Mike Hubbard, El Centro, California, grower.

"I want good seed. Fact is, I want the best. But I got to consider prices too," he said.

The Seed Research Specialist representative had noted the raised eyebrow and quizzical look.

"You're wondering if the research pays for itself in better yields," he stated. "But you already know the answer."

"Yeah," grinned the Vegetable Grower. "About this time of year, though, I like to be told about it all over again. Makes me feel better."

The SRS man understood very well. It's the high cost of production that is rough on the farm rancher. He has to figure better ways every year to get more out of his acreage to make up for it.

"Well, just remember one instance of research—it applies to all vegetables. That is the story of the lowly onion.

hybrid Granex, which met the consumer demand as to appearance and taste. Now there are many excellent varieties for your selection—all stemming from that research. And you know what it's worth in dollars and cents?"

"I'd admire to know," smiled the Vegetable Grower, in an agreeable mood.

"That research, built into good onion seed, is worth as much as \$500 more per acre, according to the Agricultural Research Service of the United States Department of Agriculture."

"Now I feel better," said the Vegetable Grower. "Thanks."

You, too, will feel better when you look for that SRS brand and know that the seed breeders—all devoted specialists—and their staff of researchers, have done their share to produce better seed, through research.

## NEWS from the seed research specialists

"You can confidently predict that our new seed treatment, which we have called 'Power-Pak', is going to be talked about plenty by vegetable growers in 1960," says Bill Chaney.

Bill is chief of Quality Control for Seed Research Specialists, Inc., and this highly responsible job keeps him on the go, inspecting seed crops at the various breeder member ranches.

"We think that Dr. Stuart Smith of the SRS research staff, has developed and carefully tested a treatment far,



**BILL CHANEY**  
Director of Quality Control

far superior to any on the market. Power-Pak contains not only a powerful fungicide, but also insecticides to protect the young seedling in the ground. The seed is further protected by giving its roots added strength on emergence, through root hormones. Power Pak is another big plus mark added to the specialization and research that makes our seed the best to be had anywhere, at any price."

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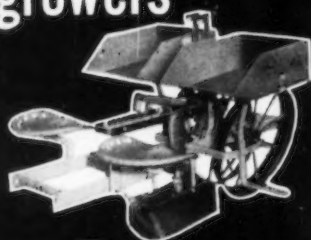
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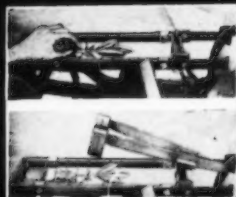




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# American Vegetable Grower

Reg. U.S. Pat. Off.  
Commercial Vegetable Grower  
Market Growers Journal

**VOL. 3**

**No. 2**

**FEBRUARY, 1960**



Cover photograph by Gladys Diezing shows field of romaine lettuce near Long Beach, Calif.

## FEATURES

<b>Today's Potato Varieties</b> .....	13
<i>By Julian C. Miller</i>	
<b>An Acre a Day</b> .....	14
<i>By Thomas M. Little</i>	
<b>Tomato Bargaining Defeat</b> .....	16
<i>By William J. Monahan</i>	
<b>New Look in Field Greenhouses</b> .....	17
<i>By E. M. Emmert</i>	
<b>Plant Grower's Corner</b> .....	30
<i>By Raymond Sheldrake, Jr.</i>	
<b>Applying Methyl Bromide</b> .....	46
<b>Cole Crops</b>	
Harvesting Aids	28
<b>Greenhouse Crops</b>	
Busman's Holiday	48
<i>By Fred K. Buscher</i>	
<b>Potatoes</b>	
Resolutions for 1960	50
Group Potato Marketing	50
<i>By John A. Schoenemann</i>	
<b>Sweet Corn</b>	
Kill Weeds When You Plant	34
<i>By Jonas Howard</i>	
<b>Sweetpotatoes</b>	
Crosscut Them!	38
<i>By D. C. Purnell and Frank H. Takatori</i>	
<b>Tomatoes</b>	
They Thrive Under Tents	40
<b>Vine Crops</b>	
Stark's Famous Melons	26
<i>By Michael Verra</i>	

## DEPARTMENTS

Letters to the Editor	6	As It Looks to Me	44
State News	18	NJVGA News	54
You Be the Expert	18	New for You	58
Calendar of Coming Events	22	Editorials	62
Answering Your Questions	23	Coming Next Month	62

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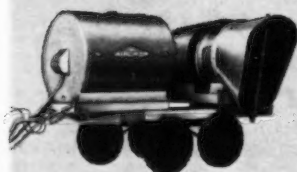
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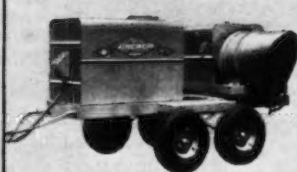
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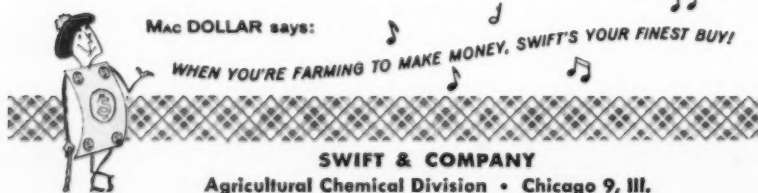
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## LETTERS TO THE EDITOR

### Familiar Face

Dear Editor:

I was surprised when **AMERICAN VEGETABLE GROWER** arrived today and I found that the cover was a picture of someone I know pretty well. Four years make some changes in a girl that age, but it still was Ruth Louise, our daughter. The holly wreath was appropriate since the picture was taken in Mt. Holly, N. J., the summer of 1955.

Ruth Louise is now married and teaching home economics in our grand new high school here in East Brunswick.

Of course, I had to renew my subscription. East Brunswick, N.J. H. E. Propst

Ruth Louise, whose picture appeared in our December, 1956, issue and who is a former national vegetable queen, made a wonderful subject for our Christmas cover. Her parents are prominent vegetable growers in New Jersey.—Ed.

### Cucurbit Problems?

Dear Editor:

In reading the November issue of **AMERICAN VEGETABLE GROWER**, I ran across an item in Answering Your Questions concerning the cross-pollination of cucurbits and squash. You say the only effect will be on the seed, not on the fruits harvested. I disagree with your answer. Here's why:

This summer I planted 500 hills of Seneca Prolific yellow summer squash and 500 hills of Cocozelle next to them. A quarter mile away, I planted 500 dark green Zucchini hybrid.

The Zucchini turned out perfectly, a fine crop. The first picking of the Seneca Prolific was also normal. However, at the second picking, the Seneca came out yellow mixed with pale green, and warts appeared on the skins. At the third picking, the squash appeared all pale green, green with yellow spots, yellow with green spots. We had to quit harvesting. It was a real mess.

The first picking of the Cocozelle was true to type, but later the Cocozelle strain disappeared and Zucchini replaced it. The crop was a mixture of the two the rest of the summer. There was even a noticeable change in the leaves. You can see why I don't understand the answer in your column.

Hamburg, N. Y.

Kenneth Henry

We are quite certain that the things Reader Henry observed in his squash were the result of infection with mosaic. Prof. Henry Munger of the department of plant breeding at Cornell University told us he has seen exactly the same change in appearance of Seneca Prolific that Mr. Henry describes. The yellow spotting in the Cocozelle and the noticeable change in the leaves could certainly be due to mosaic.

The fact that the Zucchini gave a fine crop is in line with an observation Prof. Munger has made a number of times: that Zucchini is more tolerant of mosaic than other summer squashes. The fact that the second crop was affected while the first planting turned out well also fits into the picture of mosaic, for later plantings are usually much more severely affected.

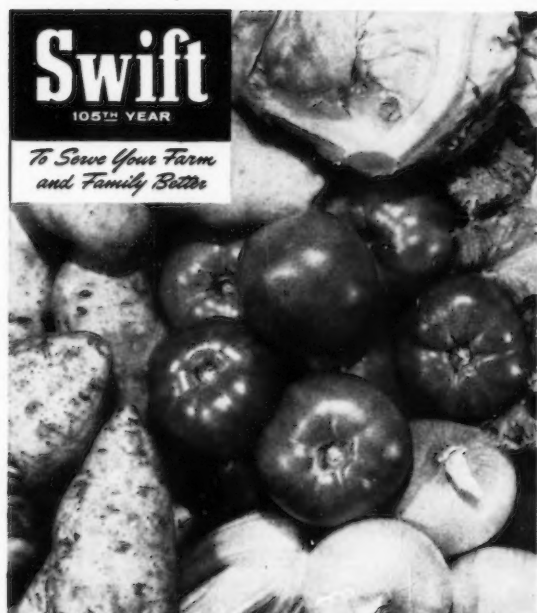
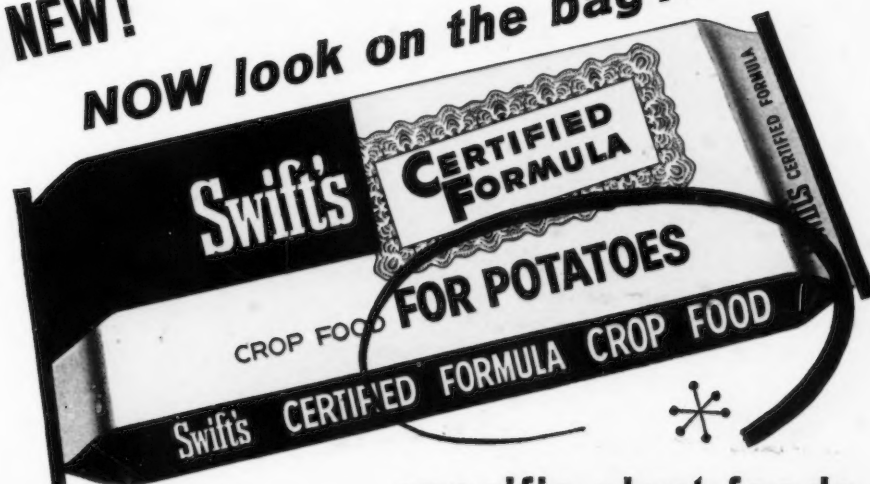
Dr. Arden Sherf of the department of plant pathology at Cornell visited farms in Reader Henry's area this season and tells us that mosaic was very prevalent on cucurbits there this past summer.—Ed.

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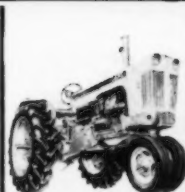
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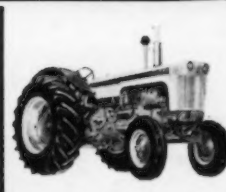
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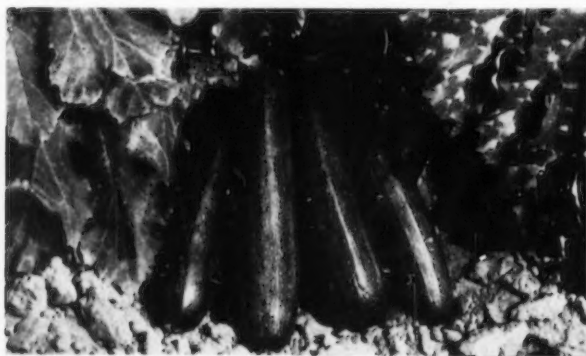
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**HARRIS' HYBRID COCOZELLE** *Famous for Heavy Yields*—Early and uniform, this hybrid is chosen by growers in many sections as the finest Cocozelle. Fruit are long, slim and handsomely striped, and its tremendous production makes it a profitable crop to grow.

**ZUCCHINI HYBRID** *Extra Early, Very Productive*—This vigorous hybrid wins greater favor every year. Buyers approve its slim, uniform shape, glossy dark green color and fine quality. Market gardeners like its earliness and tremendous yields. Every grower of summer squash should try Zucchini Hybrid.

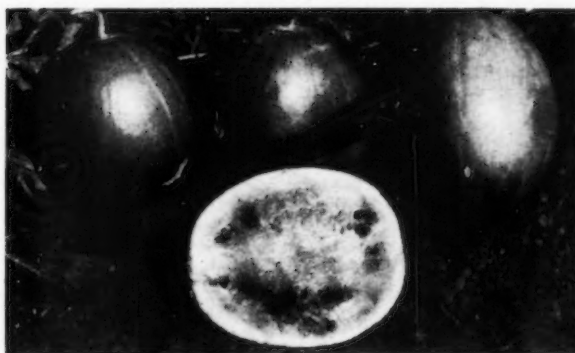


**ZUCCHINI HYBRID SUMMER SQUASH**

**FREE**—Harris' new 1960 Catalog for Market Gardeners, Florists. Send a card for your copy today.

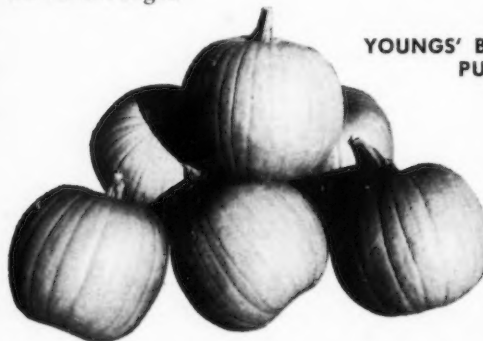
**HARVEST QUEEN** *Best Market and Shipping Melon*—Developed by Harris plant breeders, Harvest Queen is rated the ideal commercial melon by our customers. Fine type, medium size with heavy netting, hard shell. Thick, delicious orange flesh. Resistant to fusarium wilt. Our originator's strain is the melon to grow.

**MARKET MIDGET** *Brand New — Best Yet*—Wherever New Hampshire Midget is grown, try this one—its rind is firmer, seeds are fewer and smaller, flesh is finer textured and of far better quality. Very early and a heavy yielder of uniform, oval fruit, 6-7 in. in diameter.



**MARKET MIDGET WATERMELON**

**YOUNGS' BEAUTY** *Uniform Round Shape, Intermediate Size*—The pumpkin you've been waiting for. Ideal for Hallowe'en carving, round and uniform with hard, bright skin, rich orange color. The popular medium size, smaller than Connecticut Field but definitely larger than Small Sugar.



**YOUNGS' BEAUTY PUMPKIN**

**JOSEPH HARRIS CO., INC. • 80 Moreton Farm, Rochester 11, New York**

## *The Story Behind*



# TODAY'S POTATO VARIETIES

**Progress in breeding and marketing techniques point  
to future development of America's two potatoes**

By **JULIAN C. MILLER**  
*Louisiana State University*

**W**ITH the early settlers of North America came the white potato and the sweetpotato which soon became important food sources.

The white or Irish potato is believed to have come originally from Peru and northern Chile. In the early 16th century, it was taken by Spanish explorers to Europe where it particularly flourished in Ireland. Irish immigrants brought seed with them when they settled in New England and were the first to plant the white potato in North America. It later gained popularity in the South when seed potatoes were shipped there after the war between the states.

The sweetpotato was first planted in North America by southern colonists who had collected sweetpotato roots and other native foods during their stop at the West Indies.

As the railroad system developed in the United States, more white potatoes moved South where early crops could be grown at a profit for local use and for the distant markets. However, what stimulated the production of commercial sweet-

potatoes was the emphasis placed on the production of more food during World War I by USDA and various states. Such men as Dr. H. C. Thompson, at that time in charge of vegetable research with USDA, advocated the establishment of modern storage houses. This made it possible to market the crop throughout the season for local use as well as for commercial shipment.

During this same period, the Irish potato took full status as a major crop in Louisiana, Florida, and Alabama. Interest was brought about by the introduction of certified seed which was free of virus diseases. The certified program was developed by such workers as Stuart of USDA, Milward of Wisconsin, Tiebout of Louisiana, Fitch of Colorado, and Werner of Nebraska.

The important roles that both potatoes had played during World War I created an interest in better quality stock for seed and table use. A breeding program for white potatoes was initiated at Presque Isle, Maine, by USDA. New varieties, having greater yielding ability and resistance to the major diseases, such as late blight and scab, have been developed. Emphasis has also been placed on increasing the actual

food value and on breeding varieties that have superior qualities for processing, such as for chipping.

In 1948 funds were appropriated to establish a station at Sturgeon Bay, Wis., for the purpose of bringing together new breeding stocks of white potatoes from all over the world, particularly of the wild species, as well as varieties from other states and countries, that might be used in the breeding program for better white potatoes.

In the case of the sweetpotato, the improvement program in the beginning was centered on the selection of outstanding mutations which resulted from the earlier introductions from the tropical areas of the world. Due to the frequency of mutations, many types developed from the originally introduced varieties. However, no extensive systematic selection was made until 1929 when the program was instigated at Louisiana State University by Miller.

Starting with seven lots of the Porto Rico variety, he made a planting and selected 16,000 hills for study. After conducting tests over a period of several years, the Unit I Porto Rico was selected as the ideal type having the best flesh and skin

*(Continued on page 52)*





# an ACRE a DAY . . . .

**is harvest slogan of this California lettuce grower who has eliminated peaks and valleys in his nine-month production-marketing program**

**By THOMAS M. LITTLE**  
*University of California*

**N**ESTLED in a beautiful valley near San Onofre, Calif., which opens out onto the blue Pacific is A. B. Haven & Sons Ranch. As one approaches the ranch on a road bordering the bluff overlooking the floor of the valley, the lush growth of lettuce or tomatoes can be seen in an interesting pattern of irregular shaped fields; the rows gracefully curve along the contours of the land.

From these 300 acres of land flows a steady stream of lettuce and tomatoes to the market through 12 months of the year. Archie Haven, the alert ranch manager, is the oldest of six boys who came here with their father in 1925.

The ranch produces about 275 acres of lettuce, harvested from October through June, and 100 acres of tomatoes, harvested from June through December and, weather permitting, even to the first of February. Producing 375 acres of crops on 300 acres is made possible by double cropping part of the land.

"I studied the history of seasonal trends in lettuce prices a long time before I finally decided on the best method of producing lettuce at a profit," says Archie. "I decided that instead of trying to aim for heavy production when the prospects looked good for a high price, I would be better off to have a uniform supply of lettuce throughout the longest possible season in this climate."

He therefore arranges his planting schedule in such a way that he harvests on the average of an acre a day every day for nine months.

This is not as simple as it sounds because the length of growing season is continually changing throughout the year. A uniform planting schedule would not result in a uniform

harvest schedule. In the fall when the season is lengthening, the intervals between planting dates must be shortened.

In order to guarantee uniform production throughout the month of

chart that seldom is the predicted harvest date for a given crop in error by more than one or two days.

Archie carries a notebook with him at all times in which he has a full page devoted to information on each plant-



Truckload of lettuce is ready for market. Haven (shown looking over his fields in top photo) schedules lettuce plantings to harvest an acre a day for nine months of the year.

November, all plantings must be made between August 30 and September 10, an interval of 12 days. In the spring when the season is becoming shorter, intervals between plantings must be lengthened. To assure harvest through the month of May, the plantings must be spread over a 44-day period from January 30 to March 15.

Archie keeps a chart in his office based on many years of careful records showing exactly what day a lettuce crop should be planted in order to have it ready for harvest on a particular date. So accurate is this

ing. At the top of the page is the location and date of planting along with the estimated harvest date.

Every operation, such as irrigation, thinning, dusting, cultivation, weeding, and harvesting, is recorded in chronological order with the date, time required to do the job, number of men used, and the amount and kinds of materials.

With only lettuce, the ranch was virtually idle during the month of July, and during August and September was sending no produce to market. About two years ago pole tomatoes were planted to fill this gap and



Haven Ranch borders on Pacific Ocean. Fields are curved along contours of land.

make more efficient use of the available labor force.

Tomato planting is done in January and continues through July. Twenty acres are planted in January and February, another 20 in March, 15 acres each in May and June, and the final 30 acres in July. The earliest plantings are ready to start harvest in June and continue bearing until October. By that time the later plantings reach their peak of bearing and in favorable seasons will continue to bear until February.

Archie has been experimenting with polyethylene plastic covers to



Pole tomatoes are covered with polyethylene film to hasten growth.



Haven employs about 80 workers who are housed in permanent quarters on the ranch.

hasten the growth of the earliest plantings. This past season he had several acres thus protected.

When Archie first started to grow tomatoes he was told that only with 48-inch row spacing could one be sure of a profitable yield per acre. However, such a spacing did not fit in with his equipment, which is designed to handle 40- or 80-inch rows.

Archie noticed that a 48-inch spacing between tomato rows was not well adapted to mechanization of many of the cultural operations. Harvested boxes of tomatoes all had to be carried to the end of the row by hand.

"Suppose I go to an 80-inch row,"

he figured, "and it takes me an acre and a half of land to produce the same amount other growers produce on an acre. The added cost for land rental and overhead would amount to about \$75 for this extra half-acre of land. I can design a truck that will fit between these 80-inch rows and can be used to haul out the picking boxes."

Such a truck was devised with a platform on front exactly the same height as the loading dock. This platform is large enough to accommodate a pallet holding 63 picking boxes. The pickers simply leave the boxes in the row where they are filled. The truck follows behind the pickers and the

boxes are loaded onto the pallet to be hauled to the packing shed where the entire pallet is picked off with a fork lift and placed in position at the end of the conveyor belt.

The average savings in labor costs for harvesting throughout the season on each acre and a half of land turned out to be considerably more than the added cost for the extra land used up by wide row spacing.

Haven's irrigation system is designed to achieve the utmost in efficiency, with an eye toward the long-time conservation of farm resources. Water supplies are somewhat limited and the cost is high. Furthermore, excessive draft on the underground water supply might ultimately result in salt water intrusion.

The greatest source of water waste occurs during the germination pe-

riod, especially in a crop such as lettuce where water must constantly be kept near the surface of the ground until the plants become established.

The amount of water required to maintain this surface moisture is much less under sprinkler irrigation than with furrow irrigation. The fields are sprinkler irrigated with a portable irrigation system during the germination period. When the plants become established the sprinkler irrigation system is removed and the remainder of the crop is grown under normal furrow irrigation.

A new tomato packing shed is now under construction which contains many revolutionary features not found in the ordinary packing shed. The lugs on pallets are placed alongside the conveyor belt which transports them one at a time to the hopper from which they are conveyed to the washer and waxer.

A pacing belt has been installed between the pallets and the hopper to deliver the lugs one at a time at regular intervals, thus assuring an even

(Continued on page 57)

## What Caused California's

# TOMATO BARGAINING DEFEAT

**Canners refusal to meet prices brought resignation of California Tomato Growers Association as bargaining agent**

By WILLIAM J. MONAHAN

**T**ESTIFYING ruefully, even with a touch of bitterness, Alan Jensen, secretary-manager of California Tomato Growers Association, told a House Small Business sub-committee that economic strength seems to set the pattern for negotiations between growers and canners.

Because the sub-committee was studying alleged pressures brought by major food chains to force canners to sell at "discriminatory" prices below production costs, Jensen never got around to telling the whole story of the tomato bargaining debacle in California last season.

He told the committee that his association represented 1200 growers who produce about 75% of California's annual crop of tomatoes. But he didn't tell them that the association in the spring was a court-certified bargaining agent for these tomato growers and that by autumn the association had formally announced it was going out of the bargaining agent business. This wasn't pertinent to the issues of the hearing.

But it was pertinent to the farm product negotiation atmosphere in California.

The intentions of the tomato association were obvious in 1958—it proposed to engage in serious bargaining in the 1959 season over price, contract, and tonnage. The canners didn't like the idea and prepared to counter association bargaining.

In many ways, 1959 was an unhappy season for the tomato growers in California. Last year was a buyer's year with a surplus of canned tomato products probably one-third of a normal year's supply.

By contract and by outright ownership of tomato acreage the canners had available to them an adequate supply of processing tomatoes. And they eventually filled out their needs from association members when the association took itself out of the bargaining picture.

Acreage was reduced to 125,000 compared to 152,900 acres in 1958, 128,700 in 1957, and 151,500 in 1956. Tonnage sold dropped 500,000 tons below the 1958 production of 2,629,900 tons.

The reported market price for processing tomatoes was \$21.50 a ton but many growers received less than that and had to deliver their crop to the cannery receiving stations without hauling recompense.

Most growers lost money, failing to receive for their crop the cost of production which ranged upward from \$370 an acre while returns, in many cases, fell below \$335 an acre.

Labor problems were serious. Growers encountered major difficulties in getting adequate help to harvest their crop, particularly from the Mexican program. The tomato growers were one of the chief targets of the organizers of the militant AFL-CIO-backed Agricultural Workers Union.

And the growers failed in their effort to establish a marketing act for the tomato industry. The order would have established a grower advisory board with the power to set tomato acreage allotments. Crop volume would have been controlled and surplus diversions would have been spread over the whole array of growers.

The marketing order ran afoul of cannery opposition and opposition from major farm organizations on

one of its key features—limited new plantings. The California Attorney General's office ruled—as it had in the past—that planting limitations are illegal under California agricultural laws.

By fall, 1959, the movement to get the marketing order into operation had been called off and indications were that growers would abstain from pushing the program until political action had been tested in the legislature to create a more favorable climate for bargaining associations under California statutes.

Even before the marketing order came to the hearing stage, it was apparent that members of the tomato association were in trouble with the canners.

For months the association tried to get canners to approve a price of \$22.75 for processing round tomatoes as well as a contract which would have required buyers to take at least 5500 pounds of tomatoes per acre for each calendar week of the harvest. The price was only 25 cents above the 1958 payment.

By July 29, 1959, the growers retreated and the association announced that its members could sell for \$21.50 a ton but it insisted on its demand for a minimum delivery allowance.

"We feel," Jensen said, "that the canners have been unreasonable in their desire to force the price of canning tomatoes down at a time when everything the grower buys is increasing in price."

Jensen predicted that more than half of the tomato growers would operate at a net loss at the canner's price but he added, "Prolonging our dealings with canners any further

(Continued on page 40)





These plastic field houses near Lexington, Ky., have been used successfully to force crops.

# New Look in FIELD GREENHOUSES

**Field houses of plastic and wood are easy to build, inexpensive to operate**

By **E. M. EMMERT**  
*University of Kentucky*

**A**T Kentucky Agricultural Experiment Station, they have found a way to build cheap, low, unheated houses in the field for forcing crops early and late in the season.

Polyethylene, in thin grades, is used on wood frames. Though short-lived, it will last for one season and is easy to replace. The framing should last for five or more years if properly treated against ground rot.

Field houses have been used successfully for forcing crops such as tomatoes and lettuce; production costs are less than a conventional greenhouse. Plastic houses also keep excess rain from lowering the quality of the crop.

In a winter climate similar to Kentucky, lettuce can be forced in plastic houses. Light freezing occurs when outside temperatures fall below 10°F, but it will not hurt cool-season crops such as lettuce.

Frames of the field greenhouses are made of 1-inch x 1½-inch x 6-foot pieces for rafters and 1-inch x 1½-inch x 3½-foot pieces for side posts. The posts are placed every 2 to 4 feet according to the thickness of the plastic. The posts should be driven into the soil about 1 foot. If the soil is loose, longer posts should be used. No center posts are used except at the ends of the field house.

If a heavy snow is likely to be a

problem, 1-inch x 1½-inch x 6-foot pieces should be temporarily placed in center every 10 feet and slanted to the edge of the center walk so the walk is not obstructed.

A No. 11 gage wire is pulled tightly from the ridge of the first set of wood rafters along each ridge and stapled. The first and last sets of rafters are supported by braces from each 6-foot rafter to the soil. Make two braces, one on each side of the center walk at each end of the house.

The house can be 30 to 150 feet long. Shorter or longer houses are not as practical. Lower houses save heat but are harder to work in.

A support is driven in the soil and fastened to the end rafters on each side of the center walk to make a door at each end of the house. A frame door can be made to swing on hinges, but a roll-type door without hinges is adequate. The plastic forms a continuous hinge. A 1-inch x 2-inch stake should be fastened to the edge of the plastic. The door then can be opened by rolling it on the stake.

Rafters should be placed 2 feet apart for 2-mil plastic; 3 or 4 feet apart for 4-mil thickness. A 10-foot wide sheet of plastic is stretched tightly to each side and fastened by ¾-inch x 1-inch laths. If an inner layer is to be applied, it will have to be done before the outside layer is put on.

To securely fasten the plastic, nails should be placed every 2 to 3 feet



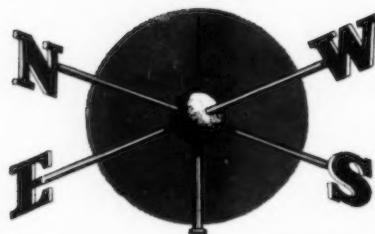
Interior of field house shows plastic stretched over wood framework. Covers are laid back in warm weather.

along the rafters. Nails should be placed closer together on plastic that "runs." The top 1½ feet of plastic on the south or east side is not nailed; plastic on the north or west side is nailed to the top. The plastic should project a few inches above the rafters on each side.

To make a dead air space a ¾-mil 10-foot wide layer of plastic is woven under 2 rafters 2 feet apart, or 1 rafter 4 feet apart, and over 1 rafter. If this plastic is stretched tightly, the top lath on the rafter over which the lining is placed will hold it taut. The inner layer should be pinned to the outside layer at the top. At the bottom the thin inside plastic should be placed in a shallow ditch and covered with soil. This makes a dead air insulation at the soil level as well.

Leaving the plastic unfastened on the south or east side provides ventilation when necessary.

When 2-foot rafter spacing is used, the loose plastic is not fastened.  
(Continued on page 59)



- Maryland Adopts Migrant Housing Code
- Kern County Potato Growers Change Name, Plan Expansion

## Migrant Housing Code

**MARYLAND**—The regulations on housing for migratory workers which were developed by the Governor's committee on migratory labor and generally endorsed by agricultural employers have been adopted by the State Board of Health, according to an announcement by Dr. Paul E. Nyström, chairman of the committee and director of extension service of University of Maryland.

These regulations are to go into effect for the next crop season, and will be administered by the State Department of Health.

In general, the regulations call for issuance of annual permits for operation of migratory camps; frequent inspection of camps; minimum standards for construction, sanitation, equipment, operation, and maintenance; and for adequate sewage and water facilities. Responsibility for keeping the camp area orderly is placed on the migrants, themselves.

## Potato Group Expands

**CALIFORNIA**—Potato Growers Association of California and Arizona is the new name of Kern County Potato Growers Association. At their annual meeting in December members approved expansion of the organization to include grower membership from all potato producing areas in California and Arizona. A governing board was elected to conduct appropriate business, including budget policy planning and election of 1960 officers, executive and working committees.

Dr. Charles M. Rick, Jr., professor of vegetable crops, University of California, Davis, was presented the AAAS-Campbell Award for Vegetable Research at the meeting of American Association for Advancement of Science held recently in Chicago, Ill.

Rick's basic research, shedding light on the biological relationships of cultivated tomato varieties and their wild relatives, won him the award, consisting of \$1500 and a bronze metal.

The award was established by Campbell Soup Co. for "outstanding single research contribution, of either fundamental or practical significance, relative to the production of vegetables . . . for processing purposes."

## Oppose Gov. Meyner

**NEW JERSEY**—At a recent growers' meeting, Carleton E. Heritage, president of New Jersey Farm Bureau, said that the swift decline of farm incomes in the state is the reason that Farm Bureau had opposed some of the more idealistic proposals made by Governor Meyner on migrant labor at the hearing of U.S. Senate Subcommittee on Migratory Labor.

Meyner, who referred to "a pocket of serfdom" in the migrant field, proposed a federal program including an extension of

the minimum wage law in his testimony before the Senate committee.

"Show our non-subsidized New Jersey farmers how they can pay higher wages under law and get it back from a market place which finds all the balance of power on the other side and they will be happy to go along with improved standards for migrants in housing, pay, and the rest," Heritage commented.

Heritage also spoke of the inequities brought about by an ever-smaller number of powerful buyers from the big chain stores.

## Bright Future

**GEORGIA**—Greater interest is being shown by Georgia growers in vegetable growing due to curtailment of production of such crops as peanuts and cotton. This statement came from O. J. Woodard, horticulturist at Georgia Coastal Plain Experiment Station, Tifton. He said about 25 different vegetables are being grown in the state for market and predicted that greater quantities would be grown in future years.—Pauline T. Stephens.



## CAULIFLOWER GROWER BREAKS RECORD

Showing Queen Lucille Allen, San Antonio, his prize-winning cauliflower is Gus Roberts, Pearsall, Texas, who was named grand champion at 8th annual South Texas Vegetable Day Exposition held in San Antonio. The nine-year-old boy received a record-breaking \$2750 prize for 12 perfect heads of cauliflower which he grew for the show. Junior Champion Kitty Vaughn (left), 12, received a \$375 prize for her tomato exhibit.

## New Tomato Variety

**SOUTH CAROLINA**—Marion, a new Fusarium wilt resistant tomato, has been released by Clemson College Agricultural Experiment Station, Clemson.

Marion was developed by Dr. William M. Epps, head, Clemson's department of botany and bacteriology, and Dr. W. R. Sitterly, Truck Branch Experiment Station, Charleston.

Fruit of the new variety is uniform, large, smooth, deep ovate with red flesh. Marion, though somewhat larger, resembles Rutgers in size, shape, and general appearance.

The new tomato is resistant to Fusarium wilt, gray leaf spot, and cracking. It is moderately resistant to early blight. Marion is a high yielder. It matures earlier than Rutgers and about the same time as Homestead.

## Onion Men Meet

**ILLINOIS**—The first annual report on National Onion Association's promotion program, presented by Jack Rose, executive-secretary, was the highlight of annual meeting held in Chicago in December.

The National Onion promotion program, which was launched last fall, is being financed through voluntary contributions of three-tenths of a cent per 50-pound bag of onions. Growers pay two-tenths, shippers one-tenth of a cent. Onion men generally agreed that the program is receiving food industry and consumer response.

President Veril Baldwin was unanimously re-elected at the meeting and Lee Hayes of Idaho named new vice-president.

In an address before the 41st annual convention of American Farm Bureau Federation, Commissioner George P.

## YOU be the EXPERT!



**JERRY SMITH'S** neighbors thought his cauliflower trouble was due to frost. He didn't cut anything from one 5-acre field. Leaves were long, narrow, twisted, and misshapen. The growing points had died on many plants. But Jerry knew that the temperature had not dropped that low. This field had been in potatoes for many years. No insects were observed, and the soil had been fertilized with 1500 pounds of a 5-20-20. What is your diagnosis?

Answer on page 46



# GUARD AGAINST FARM HAZARDS

...with Willson  
Safety Equipment

Spraying, dusting, cultivating—even routine repair work exposes you or your family to accident hazards and health impairment. *Right now* is the time to safeguard yourself by wearing these dependable Willson protectors:

**AGRI-TOX Respirator** meets USDA recommendations for protection against harmful insecticides, fungicides, herbicides, seed treatments, and paint sprays. Lightweight mask is comfortable even after all-day wear in the orchard or fields. AGRI-TOX is furnished with six dust filters and two chemical cartridges—all easily replaceable—to provide eight-hour protection (continuous or accumulated).

**Nuisance Dust Mask** comfortably protects your lungs from fertilizers, grain dust, flour, cement dust, sawdust, and other dusts. Compact size permits unobstructed vision. Facepiece is molded rubber with snap-on elastic headband. Two exhalation valves assure easy breathing in heaviest dust areas.

**MONOGOGGLES** for maximum comfort, safety, and efficiency in fields or repair shop. Lightweight, soft frame and nosepiece rest snugly and comfortably on your face. Can be worn over streetwear glasses. Thick plastic lens assures high-impact resistance and undistorted "picture window" vision. One-piece rubber headband easily adjusted for personal fit. MONOGOGGLE and AGRI-TOX worn together provide full face protection.

**AGRICULTURAL GAS MASK** for extreme hazards, such as fumigating, mixing insecticides and fungicides indoors, greenhouse spraying, handling anhydrous ammonia in bulk, and for other operations in which normal respirators do not give adequate protection. Five styles of full-face masks have variety of canister contents to protect against specific fumigants, commonly used on farms.

**Stop farm hazards before they stop you!** Ask your farm store or hardware dealer to show you Willson's low-cost safety equipment.

**WILLSON®**

PRODUCTS DIVISION  
RAY-O-VAC COMPANY

Box 160, Reading, Pennsylvania



# SUCCESSFUL Vegetable Growers EVERYWHERE praise BUFFALO TURBINE Concentrate Sprayers



Model CPS-2  
Buffalo Turbine Sprayer.  
Capacity 200 gals.

## Here's what they say

### 2 to 3 Times Faster

"On our beans and tomatoes we cover the area 2 to 3 times as fast as we would have with conventional equipment. In fact, there was many a day when 60 to 70 acres were covered in one day."

### Paid for Itself in One Season

"We believe that we paid for the duster in extra yield of green onions alone in only one season. We also did a better job of dusting with less dust and saved time and hard work."

### Covers 14 Rows at a Time

"Each year I have spray dusted about 50 acres of potatoes and 400 acres of dry beans. There was no blight or insect damage. We covered a minimum of 14 rows at a time."

### Corn Borer Loss Less Than 1/4 State Average

"As large producers of seed corn in an area where the corn borers have been very heavy, we were happy to find that our loss this year after spraying or dusting with D.D.T. was less than three per cent, while the state average loss was fourteen per cent. The savings to us in quality corn and increased yields paid for the machine several times over."

### Puts the Dust on Underside of Leaves

"This last year I dusted about 70 acres with the Turbine, consisting of beans, sweet corn, cabbage, cauliflower, cucumbers, tomatoes and squash. I was able to do on an average of 12 acres an hour. I was able to get dust on the under side of the leaves and also down into the heart of the plant. I think that this machine is one of the most practical pieces of equipment that can be used in my type of farming."

### Turbo-Spraying or Turbo-Dusting

The only machine on the market dispensing liquid or dust separately or both at the same time. Powerful "Turbulent Air" blast gives greater controlled coverage than ever before attained. Send for complete information.

**BUFFALO TURBINE**  
**AGRICULTURALEQUIPMENTCO., INC.**  
68 Industrial Street      Gowanda, N.Y.

Larrick of Food and Drug Administration called for methods of enforcing the rules that specify safe conditions for using toxic materials.

Under the Federal Food, Drug, and Cosmetic Act, Larrick said, the Food and Drug Administration is required to establish safe tolerances for pesticides in or on crops when the evidence shows that the proposed conditions of use will yield residues within these tolerances.

According to Larrick, neither the Administration nor USDA is authorized to withhold approval until they have sufficient funds and staff to deal with the extra enforcement burden.

"We must be in a position to assure the public it is receiving adequate protection. Enforcement of the pure food and related laws must keep pace with rule making. There are a number of possible solutions—one would be to change the laws to provide that USDA and our department shall not allow a new use of a pesticide on food crops unless there is an affirmative showing that facilities are available for enforcing the new registration," Larrick stated.

Delegates attending the AFBF convention were cautioned to follow label directions when applying chemicals.

Southern Illinois University has announced the appointment of John F. Kelly, 27, Chicago, as vegetable crops specialist. A graduate of Michigan State University, Dr. Kelly recently received his doctorate in horticulture from University of Wisconsin. His doctoral dissertation was on "Boron Utilization by Table Beets."

### Frost Kills Peppers

TEXAS—Three frosts during November killed about 80% of the fall pepper crop in the lower Rio Grande Valley.

Growers and shippers in the area report the big crops of cabbage and carrots escaped injury. The citrus crop was not damaged by the frosts.

### PVGA Gets Answer

PENNSYLVANIA—In a letter to Pennsylvania Vegetable Growers Association, William L. Batt, Jr., Secretary of Labor and Industry, said that a state minimum wage for agricultural workers would place Pennsylvania farmers at a competitive disadvantage in the national markets.

The letter was written in response to PVGA's resolution opposing establishment of a minimum wage.

Batt stated Pennsylvania farmers who commonly paid 75 cents an hour minimum could not compete with distant Southwestern states where Mexican Nationals are being employed at rates as low as 50 cents an hour.

In view of this, Batt said, a national, rather than a state, minimum wage seems to be desirable.

The Administration's minimum wage bill, H. 1944, now in Legislature, specifically exempts farm wages.

### Two New Varieties

LOUISIANA—Red Global, a new disease and heat resistant tomato variety, has been developed by Louisiana Agricultural Experiment Station, Baton Rouge.

Fruit of the new variety is bright red in color, shows some degree of resistance to cracking, and has a mild, sweet flavor. Red Global has a deep globe shape. It is a cross between Louisiana Slicer and Marglobe.

Red Global has shown a high degree of resistance to fusarium wilt and foliage

diseases. It will set fruit under higher temperatures than most varieties. It is recommended for commercial production as a second early variety.

A new okra variety, Gold Coast, has also been released by Baton Rouge experiment station. It is a cross between Louisiana Market and PI 3650 from African Gold Coast.

Gold Coast has a dwarf plant (3½ to 4 feet) for easy harvesting. It has a straight, dark green pod, excellent for freezing and local market. During edible stages, the pod varies from 3 to 4 inches in length and ½ to ¾ inch in diameter.

The plant has shown high resistance to heat and continues to fruit over a long period of time.

### B & L Farms Sold

FLORIDA—The bankrupt B & L Farms of Princeton—once rated the nation's largest tomato-growing firm—has been purchased for almost \$2,500,000 by R. W.



MUELLER NAMED PRESIDENT

New officers of Vegetable Growers Association of Missouri are, left to right, Milton Mueller, Creve Coeur, pres.; Ben Alexander, Columbia, vice-pres.; and Arthur Gaus, Columbia, sec'y-treas. They were elected during the Vegetable Growers Short Course held recently at University of Missouri.

Fincher, Miami, and James J. Cerniglia, South Dade tomato shipper.

Fincher and Cerniglia bound the deal at a Federal Court bankruptcy hearing with \$150,000. Their corporation, Cer-Fin Farms Corp., has two months to raise an additional \$800,000 in cash. The purchasers have agreed to assume \$1,500,000 in mortgages on the 11,000-acre farm.

Included in the purchase was a packing house, which in past years turned out 70 to 80 cars of tomatoes daily during harvest months.

Food and Drug Administration spokesmen have reported celery shipments seized by FDA from one grower in Florida have been found to contain excess residues of pesticidal chemicals.

At FDA it is stated that there are other seizures from this same source at terminal receiving points which are pending and will subsequently be announced when local Federal District Courts act on FDA requests.

Although they represent a substantial volume, FDA officials say these celery shipments are a mere drop in the bucket as compared with the over-all celery movement.

### Growers, Shippers Meet

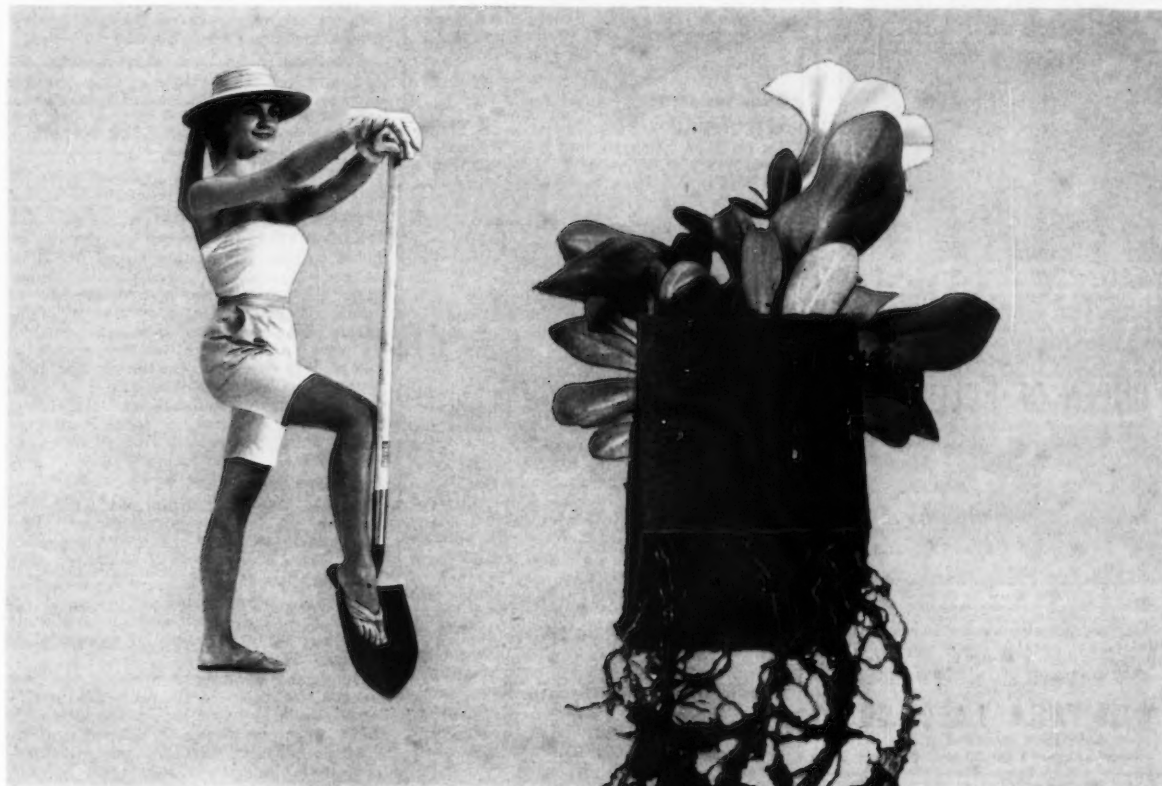
IDAHO—At a recent meeting of Idaho Growers and Shippers Association in Twin Falls, members called for labeling of Gem State potatoes with "Grown in Idaho," including those processed into another form.

Jerry Lee, secretary of Idaho Potato and Onion Commission, said his group had endorsed the use of stamping machines and uniform labeling.

Officers elected at the meeting were

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First, you get top selling prices because you get prime plants. Bird Vita-Bands eliminate transplant shock by containing roots until transplant time. Vita nutrient prevents nitrogen depletion of soil. Plants mature 7 to 10 days earlier.

Second, Vita-Bands retain their durability right through the selling period — won't fall apart in your hand.

Third, straight-sided Vita-Bands allow maximum space for root growth. They fit snugly together, yet also allow plenty of room for top growth.

Fourth, they're so low in price. The average price on popular sizes is less than half-a-cent each. Compare their unit cost with any other container. Vita-Bands are still your best buy!

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**EARLY GOLD CREST**



New, first introduced in 1958. One of the earliest in experiment station tests in both USA and Canada. Resistant to Bacterial Wilt. Heavy crop of 8 inch ears, 12 rows; light tips, sturdy plants. Average nearly 2 ears per stalk. Developed for growers to hit the early market with the finest quality.

*New, Fusarium Resistant*  
**QUEEN OF COLORADO**



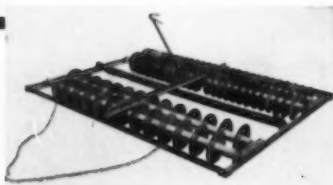
New Fusarium Wilt Resistant Queen of Colorado Cantaloupe. Vigorous vines; keeps well after picking. Fine appearance, delicious flavor, ideal market variety. Has good sales appeal on all markets. OUR SPECIAL CATALOG lists 87 selected strains planted by growers in 50 states. Send for your

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Vern Routh, Twin Falls, president; Sterling Johnson, Parma, vice-president; M. M. Don Bass, Idaho Falls, second vice-president; and Robert Belson, Idaho Falls, secretary-treasurer. — *Ernest W. Fair.*

**Virus Isolated**

**WISCONSIN**—Pathologists J. A. Tomlinson, R. J. Shepard, and J. C. Walker, of University of Wisconsin, have devised a method of isolating the cucumber mosaic virus in purified form.

The purification method opens the way to preparation of standard antiserum of cucumber mosaic virus. This antiserum can be used to identify strains of the virus and to distinguish between this virus and others affecting cucumbers.

**Seed Treatment Pays**

**NEW YORK**—Treatment of cucurbit and winter squash seed with insecticide-fungicide combinations is more effective than fungicides used alone, according to field tests conducted at New York Agricultural Experiment Station, Geneva.

Treatment is aimed at protecting the seed against injury from seed-corn maggot and seed-rotting fungi in the soil.

Tests were made on a fine sandy loam soil and a silt loam, using a number of combinations of different insecticides and fungicides.

Station workers report treatment improves emergence, especially under conditions favorable for activity of seed-corn maggot and seed-decay organism. Seedlings from treated seed were more vigorous than those treated with a fungicide alone or from untreated seed.

Prof. Allan G. Newhall, specialist in vegetable diseases in the United States and other countries, has retired from Cornell University, Ithaca.

Prof. Newhall's work at Cornell has included directing graduate student research on vegetable disease problems, developing seed and soil treatments, testing fungicides, and conducting research on nematode diseases of plants.

While on leaves from Cornell, Prof. Newhall has taught and conducted research at University of California, Costa Rica, the Philippines, and Panama.

**Film Market Story**

**MAINE**—"Market Man"—a color film describing the career of a market service man in the food trades has been released by Maine Department of Agriculture.

Maine has 17 market service people, most of them working to improve storage handling and display of Maine potatoes in terminal markets, chain warehouses, and stores in the eastern United States. The project was initiated by Maine and USDA in Maine in 1947.

"Market Man" will be distributed to television stations and groups with the double purpose of explaining work of marketing specialists and showing consumers how growers and shippers produce, protect, grade, and ship food, explains H. G. Hawes, Department of Agriculture publicity director.

**New Broccoli Variety**

**MICHIGAN**—Spartan Early, a new broccoli variety, has been released by Michigan State University Agricultural Experiment Station.

Plants of the new variety are uniform in size and shape and are light bluish-green in color. Central heads on the plant mature within a three-day period. Other

varieties mature over a period of 23 to 27 days.

Spartan Early should provide fresh broccoli for the market 10 to 14 days earlier than some of the more popular varieties.

The variety has one short-coming, according to its developer, Dr. Shigemitsu Honma, assistant professor of horticulture. When grown where it is hot, on low fertility soils, or where moisture is limited, the plants are short.

**New Fertilizer Applicator**

**OKLAHOMA**—Engineers of the Oklahoma Experiment Station report that they have developed a disk-type fertilizer applicator that has so far proved superior to split-boot and other conventional applicators. The disk-type, they say, enables growers to secure with no increase in the seeding rate of crops, thicker and more uniform stands, possible increases in yield, and plants better suited to mechanical harvesting.

**Increased Income**

**COLORADO**—The Colorado Crop Reporting Service announced recently that the gross cash value of the 1959 vegetable crop was \$18.6 million as compared with \$14.5 million in 1958.

Growers received higher prices for 12 crops this year with lettuce averaging \$4.05 per hundredweight as compared to \$1.15 in 1958.

The most significant increases in production of commercial vegetables in 1959 were tomatoes for processing, 42%; lettuce, 21%; cantaloupe, 14%; and spinach, 12%. Total acres harvested were 40,370.—*Ernest W. Fair.*

**CALENDAR OF COMING MEETINGS AND EXHIBITS**

**Feb. 1-3**—Ohio Vegetable and Potato Growers Association annual meeting, Neil House, Columbus.—E. C. Wittmeyer, Sec'y, 1827 Neil Ave., Columbus.

**Feb. 1-3**—Pennsylvania Vegetable Growers Association annual meeting, also educational conference sponsored by PVGA, Pennsylvania Canners Association, and Pennsylvania State University Dept. of Hort., Nittany Lion Inn, Pennsylvania State University, University Park.—Rudolph Grob, Sec'y, R.D. 1, Millersburg.

**Feb. 1-4**—United Fresh Fruit and Vegetable Association 56th annual convention, Conrad Hilton Hotel, Chicago.—Association Headquarters, 777 14th St., N.W., Washington 5, D.C.

**Feb. 1-5**—Michigan State University's annual Farmers' Week, East Lansing.

**Feb. 3-5**—Ohio State Horticultural Society annual meeting, Neil House, Columbus.—C. W. Ellenwood, Sec'y, Rt. 2, Wooster.

**Feb. 4-13**—Maine Potato Week.—Gerald C. Dunn, Marketing Specialist, Maine Department of Agriculture, Augusta.

**Feb. 11**—Horticultural Commodity Day: Tomatoes, University of Maryland, College Park.

**Feb. 18**—Horticultural Commodity Day: Sweet corn, University of Maryland, College Park.

**Feb. 25**—Horticultural Commodity Day: Snap beans, University of Maryland, College Park.

**Feb. 22-25**—Weed Society of America third biennial meeting, Cosmopolitan Hotel, Denver, Colo.—W. C. Shaw, Sec'y, USDA, Beltsville, Md.

**Feb. 29-Mar. 3**—National Conference on Handling Perishable Agricultural Commodities, Purdue University, Lafayette, Ind.

**Aug. 14-18**—South Carolina Farm and Home Week, Clemson College, Clemson.—Thomas W. Morgan, Chairman, Clemson College Extension Service, Clemson.

**Sept. 11-14**—Produce Packaging Association annual convention and exposition, Americana Hotel, Miami Beach, Fla.—Robert L. Carey, Exec. Sec'y, P. O. Box 29, Newark, Del.

**Sept. 27-29**—Florida Fruit & Vegetable Association annual convention, Hotel Fontainebleau, Miami Beach.—J. Abney Cox, General Convention Chairman, Princeton.

AMERICAN VEGETABLE GROWER



## Answering Your QUESTIONS

Don't let your questions go unanswered. Whether large or small, send them with a four-cent stamp for early reply to Questions Editor, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

### GROWER-SHIPPER

First of all, could you send me the name and address of the publication *The Packer*?

Second, I would like to join Vegetable Growers Association of America. Can you give me any particulars?

Third, I am shipping prepacked produce from our farms next summer in large quantities and wonder if there is a manual put out for buyers wherein we could have our name and types of produce listed.

Fourth, is there any manual put out on buyers' names and addresses?—Illinois

1) Address *The Packer* at 2nd and Delaware Sts., Kansas City, Mo.

2) VGAA will be delighted to have you as a member. Write for membership blank to R. M. Frederick, 17th and Pennsylvania Ave. N.W., Washington 6, D.C.

3) To be listed as a supplier of prepackaged produce, write Robert L. Carey, Produce Packaging Assn., South College Ave., R.D. 2, Newark, Del.

4) United Fresh Fruit and Vegetable Assn., at 777 Fourteenth St. N.W., Washington 5, D.C., publishes a membership list which contains many buyers' names.

### HAND SEEDER

I would like to know the name of a company that makes a hand seeder.—New York.

One of the following should help you:

The Cyclone Seeder Co., Urbana, Ind., makes a hand broadcast seeder. The S. L. Allen Co., 5th and Glenwood, Philadelphia 40, Pa., makes a combined seeder and single wheel hoe which is hand operated.

From Sears and Roebuck or Montgomery Ward, you can obtain a hand corn planter.

### GREENHOUSE HERBICIDES

I would like to know what herbicides would be safe to use in treating greenhouse soil in which tomatoes and peppers are grown.—Arkansas.

Usually it is necessary to sterilize greenhouse soil to prevent damping off and other soil-borne diseases. The sterilization process will normally take care of the weed problem.

There are four generally accepted chemicals to use in sterilizing greenhouse soil: formaldehyde, chloropicrin (tear gas), methyl bromide, and Vapam.

A more complete discussion of problems of greenhouse plants is given in the bulletin *Commercial Production of Greenhouse Tomatoes*, which you can obtain from Superintendent of Documents, Government Printing Office, Washington 25, D.C. Ask for Catalog No. A 1.9:2082 and send 15 cents to handle costs.

### STONE PICKER NEEDED

In past issues of your magazine I have seen ads for stone pickers. Where can I get one?—Ohio.

Try the following: Bridgeport Implement Works, Inc., Stratford, Conn.; Lockwood Grader Corp., Gering, Nebr.; Min-Kota Mfg. Co., Moorhead, Minn.; WASA Potato Harvester Co., Mars Hill, Maine.

### POSSIBLE MULCH?

I have heard there is a poisonous substance given off by walnut trees, but I would like to use walnut husks to mulch my tomatoes. There is a plentiful supply available.—Missouri.

Walnut husks will do more harm than good. All walnut products, such as husks and hulls, contain a poisonous alkaloid and tannic acid. These are harmful to certain plants, particularly tomatoes.

FEBRUARY, 1960

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SHAPE HOLDING PEAT POTS

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4 in		500	\$28.75M	32	\$28.75M	32
500 to 2,000		9,500	\$26.25M		\$26.25M	
3 in			Square	Round		
1,000 to 9,000	1,000	\$17.25M	37	\$17.25M	25	
10,000 to 49,000		\$16.00M		\$12.75M		
2 1/2 in			Square	Round		
2,000 to 18,000	2,000	\$10.50M	36	\$7.75M	29	
20,000 to 74,000		\$9.75M		\$7.25M		
1 3/4 in			Square			
2,500 to 17,500	2,500	\$6.90M	28			
20,000 to 72,500		\$6.40M				

### NEW!!! Lower Cost THINLINE

			Square	Round
3 in				
1,000 to 9,000	1,000	\$14.50M	34	\$13.00
10,000 to 49,000		\$13.25M		\$12.00
2 1/2 in			Square	Round
2,500 to 17,500	2,500	\$7.50M	32	\$7.00
20,000 to 72,500		\$7.00M		\$6.50

PRICES PREPAID on 150 Pounds or more anywhere within U. S. A., excluding Alaska

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## Visqueen Polyethylene Film

3' x 1,000'	.0015 Gauge Black Only	.....	\$14.19	20' x 100'	.004 Gauge Black and Clear	.....	\$25.26
4' x 1,000'	.0015 Gauge Black Only	.....	18.91	32' x 100'	.004 Gauge Black and Clear	.....	40.42
4'2" x 200'	.002 Gauge Clear	.....	5.26	1' x 300'	.006 Gauge Black Only	.....	5.69
12' x 200'	.002 Gauge Clear	.....	15.16	10' x 100'	.006 Gauge Black and Clear	.....	18.94
3' x 100'	.004 Gauge Clear	.....	3.79	16' x 100'	.006 Gauge Black and Clear	.....	30.31
10' x 100'	.004 Gauge Black and Clear	.....	12.63	32' x 100'	.006 Gauge Black and Clear	.....	60.62

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Positive protection. Uses carbide or acetylene. Distributorships, dealerships available. Stocks in San Francisco, New Orleans, Baltimore, New York and Chicago. B. M. LAWRENCE & CO. 244 California Street San Francisco 11, Calif.

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New 98-ft. 330 W. with built-in 70° fix temp. soil thermo. For double ash bed or 36-sq. ft. bench. Get more for larger areas. No. 598T ppd., \$9.95. Money-back guarantee. No. C.O.D. or open a/c. Clip \$10.00 bill and your address to this ad. "There is no substitute for bottom heat." W. Coast—1864 S. 120th St., Seattle 88, Wash. GRO-QUICK Mfrs., 357 W. Superior St., Chicago 10, Ill.

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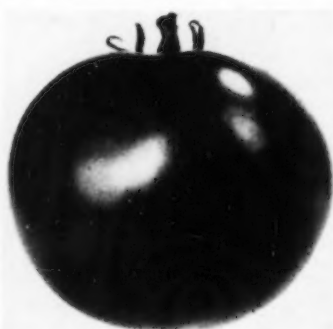


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Harrisburg, Penna.

## VINE CROPS

### Stark's Famous Melons

**S**TARK'S FAMOUS MELONS are well known throughout Dutchess County, New York, and parts of Long Island, Connecticut, New Jersey, and Vermont, for their excellent size and superb quality.

These popular melons derive their name from the grower, Ward Stark, 65, of Stormville, N. Y. Ward has been raising cantaloupes since he was 14 years old, and immediately recognized that consumers were willing to pay premium prices for quality melons. He feels his success hinges on his "tender, loving care" philosophy, good management, quality control, and his eagerness to try new methods.

In addition to growing 15 acres of melons, Stark also grows about 10 acres of potatoes and 50 acres of miscellaneous vegetables for his roadside stand.

Stark's operation begins in the greenhouse where he starts potted plants. Formerly they were raised in cold frames. The seed is sown about the first of April in flats containing a mixture of 25 shovels of alfalfa field soil, one quart of 5-10-5 fertilizer, and 1 bushel peat moss. Each flat consists of 26 bands. After the plants emerge they are thinned, leaving two plants to each band.

**Dampening-off** is always a problem. Although various fungicides and soil sterilization are not always effective, Stark has been able to reduce this disease by spreading sawdust lightly over the flat after seeding. One shovelful of lime is mixed with each bushel of sawdust before application to neutralize the sawdust.

This is the first year Stark has raised plants in a plastic greenhouse. He finds ventilation is very important with this type house. A close watch of the temperature must be made in order to harden the plants and prevent rapid, succulent growth.

Since rotation is a must, selecting the field is important. Stark always selects a good sandy loam, well-drained soil where rye or sod has been plowed down. Rye sod substitutes for his lack of manure.

Transferring the plants to the field usually begins the latter part of May. Stark transplants each band



Plastic greenhouse is used to produce earlier plants. Stark finds ventilation is important to avoid weak succulent growth.



Stark grows his plants in flats each containing 26 bands with 2 plants to each band.

with an ordinary plant setter, which has been adapted to open a larger furrow. Spacing is 3 feet in the row and 7 feet between rows.

The plants receive 700 pounds of 5-10-10 per acre, applied in the row and worked in with a rototiller. The rototiller is also effective in weed control, since it is set to cultivate within 2½ inches of the plant.

Normally, insects and disease are not a problem. Alternate captan-methoxychlor and parzate-malathion sprays are applied every 7 to 10 days from the time the plants are set until they are ready to pick. Stark feels following a tight program is a must for good insect and disease control. Cutworms, however, can be troublesome where chlordane is not applied before planting.

Stark's "tender, loving care" philosophy is particularly applied to training the vines. In order that each vine receives maximum sunshine, they are hand-spread to prevent them from growing in bunches. In addition, each vine is pinched when they are 2½ inches long; this sets them into fruiting sooner.

Getting help to handle the vines properly can be a problem. Stark's success with help is attributed to

#### PLASTIC GREENHOUSE PLANS

Construction details for Cornell University plastic panel greenhouse, names of suppliers of materials, films, and adhesives for plastics, and reprints of current articles on plastic greenhouses are available from **AMERICAN VEGETABLE GROWER**, Willoughby, Ohio, for 50 cents a set.

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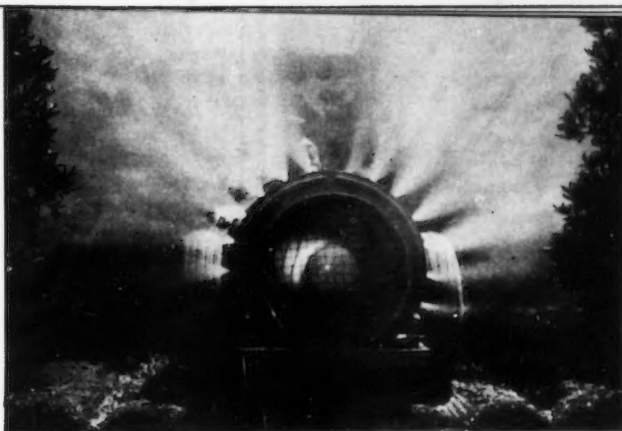
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  - What to look for
  - Common mistakes in selection
- How humidity affects spraying practise
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## AIR CARRIER SPRAYER!

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Gentlemen:

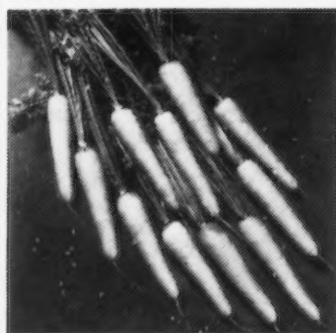
Please send me, without obligation, your free booklet on air carrier spraying.

NAME \_\_\_\_\_

GROWER \_\_\_\_\_ STUDENT \_\_\_\_\_ OTHER \_\_\_\_\_

ACREAGE IN ORCHARD \_\_\_\_\_ ROW CROP \_\_\_\_\_ FIELD CROP \_\_\_\_\_

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Ideal for Cellophane Packages

Special Nantes are exceptionally tender and sweet with a very small core. Slender, bright orange-red roots 6 to 8 inches long. Desirable for both market and home gardens. Fine re-selected strain grown from our own stock seed. Postpaid: Pkt. 20c; oz. 40c; 1/4 lb. 90c; lb. \$2.20.

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### WINPOWER Agrotiller

Winpower Mfg. Co., Newton, Iowa

"treating them fairly" and close supervision. Puerto Ricans, obtained through the State Labor Employment Department, are mainly used.

Harvesting usually begins about late July. The melons are harvested in bushels and are brought to the roadside stand where each melon is graded for size and defects. Stark feels for best quality, the melons should be picked every day.

Since he prides himself on selling plant-ripened melons, each melon must be picked when the stem slips easily from the melon. This leaves a moist area at the stem end, which must be waxed to prevent rapid decay. Ordinary melted paraffin wax is used. When the humidity is low and rapid healing can take place, waxing is not required.

Approximately 25% of his melons are sold retail at his roadside stand, and 75% wholesale to other stands. Every melon sold carries his Scotch tape label, "STARK'S FAMOUS MELONS," an excellent advertising gimmick.—Michael Verra, Dutchess County Assistant Agricultural Agent, Millbrook, N.Y.

## COLE CROPS

### Harvesting Aids

THE latest in mechanical aids for growers is being developed at University of Florida Agricultural Experiment Station, Gainesville.

Two experimental machines to aid in handling cabbage and other vege-

tables during harvesting have been built under the direction of E. S. Holmes and L. H. Halsey. During tests conducted by the station, the experimental harvesting aids cut harvest damage approximately in half when compared with hand harvesting.

The first machine features a horizontal conveyor belt extending over several rows. The field cutters place the cabbage on the belt to be lifted by an inclined belt to the packing platform. The cabbage is weighed and packed in the field.

The platform of the harvesting aid has storage capacity for approximately 70 boxes. The scales were specially built to weigh accurately under field conditions. The wheels of the packing platform can be adjusted for varying conditions of row width and plant height.

In fields yielding about 80 boxes per acre, a good working crew consisted of one tractor driver, three packers (one of them standing beside the inclined belt and sacking cabbage not suitable for boxes), two box closers and platform unloaders, six field cutters, and two men with tractor and cart hauling packaged boxes from the field and bringing empty boxes to the machine. In lower yielding fields, the third boxer was used as an extra field cutter.

The second experimental machine has an inclined rotating table instead of the conveyor belt. The field cutters throw the cabbage onto the table, which, in turn, revolves around to the packing crew. From this point, the cabbage is handled in the same manner as with the first machine.

### WITHOUT SOIL

HAVE you tried growing vegetables without soil? In hydroponic culture, the nutrients are supplied in water solution and the plants may be suspended in water or they may be produced with roots in sand, cinders, or gravel.

The elimination of soil as the culture medium also eliminates problems such as weed control, tillage, irrigation, and the necessity for growing cover crops or adding manures for organic matter.

Hydroponic culture is not easy and simple. It is a highly specialized method of culture and successful operators must be highly skilled farmers and trained technicians.

To learn more about growing vegetables without soil, write to Agricultural Extension Service, University of Florida, Gainesville, for Circular 192, *Hydroponic Culture of Vegetable Crops*, by J. G. Stout and M. E. Marvel.



Harvesting aid has circular table rotated by hydraulic motor. Cabbage is placed on table and revolved around to packing crew.



Conveyor extends over several rows to reduce distance cutter must throw cabbage onto belt.

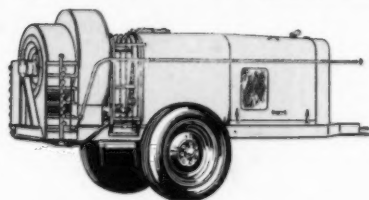


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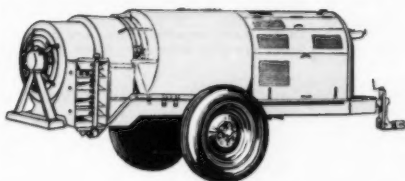


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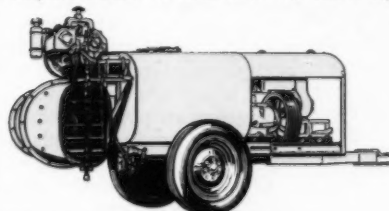
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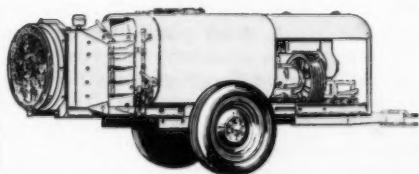
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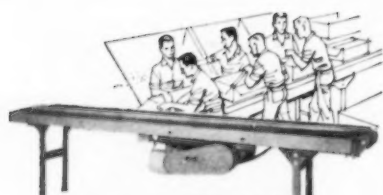
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# PLANT GROWER'S CORNER

By RAY SHELDRAKE

*Spring plant sales frequently constitute a large portion of the total income of many readers of AMERICAN VEGETABLE GROWER. During the plant-growing season this new column will be written. The field of plant growing is a broad one and each grower has different ideas on what is the best way to do certain jobs. No one way can be recommended for all growers. Generally, the column will be written with the new grower in mind. Dr. Sheldrake is with the department of vegetable crops at Cornell University, Ithaca, N. Y. Next month Dr. Sheldrake will discuss some new ideas on plant growing structures.—Ed.*

**I**T IS one thing to grow a few plants for retail selling and another to be really in the plant-growing business. This month I will cover a few items to consider to increase plant sales.

**Varieties offered** should be preferably the most modern developments and especially those recommended by the experiment stations. All too frequently extension workers are asked by home owners, "Why can't we buy the varieties you talk about?"

It is a difficult problem to grow a new, recommended hybrid, have beautiful plants, and then be constantly asked for some old variety that "Grandma used to grow." I was in one retail establishment last spring where the owner was doing his best to convince an ole-timer that this particular hybrid tomato was much better than Ponderosa. My conclusion was that the grower had better grow a few Ponderosa plants if he has many such ole-timers.

You learn from experience what the trade will want.

This calls for careful record keeping. Keep a record of how much seed of each variety you bought; how many flats or dozen "paks" you spotted out; dates that you seeded; how many you sold; and most of all, get out the book during and at the end of the plant-selling season and write down comments for next year.

If you have had many requests for a particular variety that you were not able to fill, make a note of this. It is all clear to you then, but you'll be surprised how much detail you can forget by next season.

**A definite plan** should be worked out and followed. This will increase the over-all efficiency and you will be able to satisfy more customers.

Many bedding plants, such as the F<sub>1</sub> hybrid petunias, are started in late December and up until mid to late February. A scheduling plan helps you have more plants in bloom at selling time. It is a good idea to put the growing temperature they should have on the plan. Many growers germinate petunias, for example, at

65 to 70° F. but grow them cold after transplanting in a 50° F. house. Where much help is used, a few simple notes on the plan would prevent costly mistakes.

**After a little experience**, most growers can grow a good quality plant. Try to get standardized on a method and stick closely to it. Most problems develop in peak periods when certain details are not taken care of. A good plan will help here. The plant-growing business looks like a two- or three-months deal but really is a year-round proposition.

It is easy to spot a well-organized operation: the quality is uniformly good and the owner, as well as the help, is not wasting time hurrying about. When the proper time arrives,



Today many vegetable growers are making extra profit growing plants for home gardeners.

they have the right amount of seed, the soil (or other media) is ready and sterilized, and they have the pots and paks or flats ready. You can see at a glance the fellow who did some planning.

In this day of supermarket selling of everything, you cannot possibly take time to dig a few tomato plants and a few marigolds and wrap them in newspaper. Grow them in the sales unit. Many are available for 6, 12, or even more plants. These paks are made of pressed paper, plastic, aluminum, and many other materials.

I believe the ideal pak is deep enough to hold sufficient soil for the type of plants; is rigid enough to withstand handling even after 8 to 10 weeks of being wet; is attractive; and, last but not least, has good drainage.

**A good plant-grower** must be a good salesman. Advertising is a must. Some large growers have an open house in the spring. The public must be informed that you have quality plants especially grown for them. They like to see color when buying and to help in this, some seedsmen sell plastic labels in color to put with

the display. The label will show a close-up of the bloom, will tell the final height, whether the plant prefers sun or shade, and, of course, give the name of the variety.

Another timesaver is to have pot labels printed with the variety name. More than enough time is saved in writing labels to pay for the labels, and the printed ones are much easier to read.

Good sales personnel is difficult to obtain and to train. A good plant center is best handled as a self-service department. Each pak or pot should have one of the printed labels with the price clearly evident. If not in bloom, the group should have at least one of the colored plastic cards mentioned earlier.

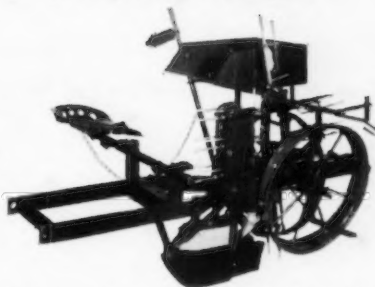
Some plant centers use regular supermarket carts, others use small wagons. This encourages browsing, which increases sales.

Items for companion sales are kept near the check-out spot and the sales person at this point should be well-informed on all of the plant materials and especially on how to grow them. He can increase sales by having close to him certain sprays or other items the gardener might need.

If you have specific topics you would like covered in the column, write and let us know. THE END.

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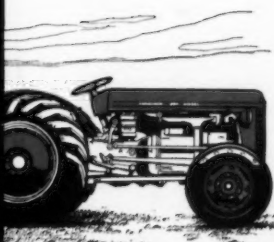
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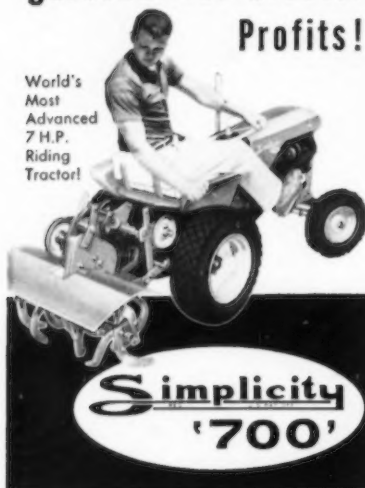
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Fig. 1—A field of early North Star (Joseph Harris Co.) sprayed with 12-inch band of Simazine to control weeds.

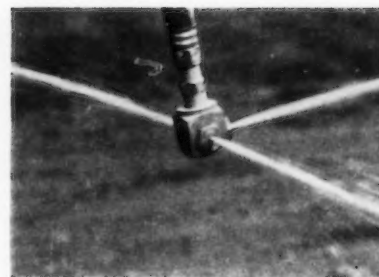


Fig. 2—A jet agitator (Spraying Systems Co., Bellwood, Ill.) is a "must" when using wettable powders for spraying.

## SWEET CORN

### Kill Weeds When You Plant

MANY sweet corn growers are taking a first look at the plant-spray method. Last year Simazine 50W\* (Geigy Chemical Co.) was generally available to growers in the United States and Canada. In 1960 Simazine and a sister product, Atrazine, will be available to growers.

Sweet corn, as well as field corn, appears to have amazing tolerance to Simazine. The weed control is excellent if properly applied (see Fig. 1).

Simazine, Atrazine, and many other chemicals come as a wettable powder. Wettable powders do not dissolve but form a suspension of small particles in a liquid. They require a slightly different technique than used when spraying emulsions or water soluble materials.

A jet agitator (see Fig. 2) is a must. This can be connected any place on the pressure line and the hose is hung so the jet agitator is on the bottom of the tank. The three streams of spray keep the wettable powder agitated.

The suction strainer is of utmost

\*Manufacturers may offer only an 80W material in 1960 which means an 80% wettable formulation. In calculating the correct amount per acre, divide the amount wanted per acre (such as 2 pounds) by the percent in the carrier (80%) and if this is done you will find that 2½ pounds of the 80% material will be needed for over-all coverage to apply 2 pounds of Simazine per acre. However, where you are spraying only a third of an acre as we are with the 12-inch band you will find that about 8/10-pound will be mixed in the 10 gallon tank to do one acre.

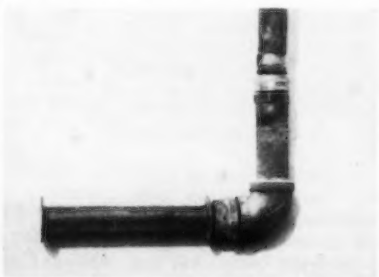


Fig. 3—If 60-mesh suction strainer clogs, use only 20-mesh slotted strainer underneath.

importance (see Fig. 3). A 60-mesh strainer (Engine Parts Co., Cleveland, Ohio) can be used. The strainer comes equipped with felt covers. These must be removed before using any wettable powders.

However, some formulations of wettable powders have caused clogging of this strainer. If this happens, slip off the screen and use the 20-mesh slotted strainer underneath only. The strainers in the nozzles behind the press wheel should be 50-mesh. The elbow in the suction line is very important in order to be able to suck to the bottom of the tank.

Many growers are reluctant to complicate their planting by having "one more thing to watch." A quick release valve solves this worry (see Fig. 4). When the planter is dropped, the sprayer is turned on automatically. When hooked up as shown, the operator has all the controls handy.

Planter conversion kits are available for most planters (Engine Parts Co., et al.). Pictured in this article is a home-made rig used on the Earlybird Farms, Ithaca, N. Y. A bracket was made to hold a milk can (see Fig. 5). The two nozzles are standard Teejets with 8002 E tips (available from Spraying Systems Co.). A few pieces of ½-inch water pipe plus a few connections and this outfit was ready to go. A band 12 inches wide will be sprayed uniformly if the nozzle tip is 7 inches above the ground. The pump is a nylon roller pump.

The milk can will hold sufficient spray material to do one acre. The



Fig. 4—Quick release valve turns on sprayer automatically when planter is dropped.

AMERICAN VEGETABLE GROWER



area covered by the nozzles (12 inches) is receiving spray at the rate of 30 gallons per acre. The pressure gauge and regulator are handy to the operator. The tractor was driven at 3 mph and the pressure was 40 pounds.

Simple calibration jars are available to aid growers in determining the correct gallonage per acre. However, only a 12-inch band was covered, or  $\frac{1}{4}$ -acre, so that 10 gallons will do one acre.

The correct amount of material (1.3 pounds of Simazine in this case—see note below) should be mixed in a clean pail first and then washed through a funnel with a screen in it. All spray water should be strained to prevent plugged nozzles in the field. Extra water can be carried to the field in milk cans and filling once an acre is rather convenient.

After last season's experience, the folks at Earlybird Farms are pleased with the excellent weed control but are thinking in terms of an 18-inch band or even overall coverage on



Fig. 5—Earlybird Farms, Ithaca, N.Y., built this home-made spray rig to fit on planter.

some plantings, especially the very early plantings.

The 12-inch band is quite narrow and if cultivation is delayed, it is difficult to cover the weeds on the edge of the band. This year the weeds got off to a fast start.—Jonas Howard.

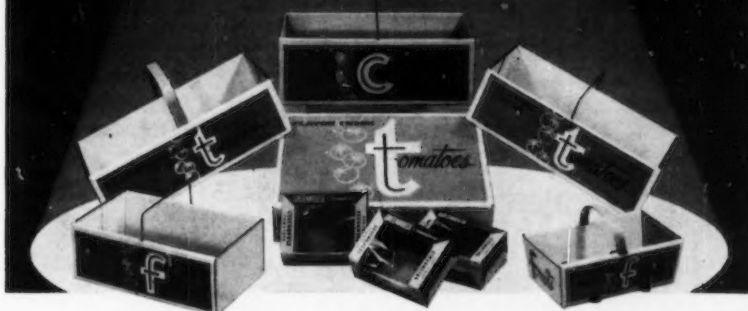
### CORNELI'S NEW LOOK

CORNELI Seed Company recently announced the promotion of William B. Carter to vice-president. Carter heads the garden seed department. Also elected vice-president was Lloyd G. Rupp, head of the lawn and garden supply department.

Under a new policy started in the fall of 1959, Corneli has discontinued its stock of general farm seeds and hybrid field corn and is specializing in Keystone garden seeds and lawn and garden supplies.

Corneli's hybrid sweet corn breeding program is being continued. Varieties already developed include Gold Rush, Sweetangold, Silverliner, and Tempo.

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## Need for magnesium sulphate in fertilizer is increasing

Throughout the United States, new areas — and new crops — are showing an increasing need for magnesium.

For example, five years ago the vegetable growing areas of New Jersey had only a few magnesium deficient areas. Today, deficiencies are known on 90% of the farms.

Similar troubles are showing up in western vegetable growing areas. Deficiencies have been reported in the midwest—usually thought to have plenty of magnesium. At present, these areas seem somewhat scattered. However, indications are that a need for magnesium fertilization will soon be widespread throughout the nation's agricultural areas.

There are several reasons for this increasing need for magnesium in fertilizers.

1. Older type fertilizers carried large amounts of magnesium as an incidental component. Today's highly refined fertilizers contain little or no magnesium.



2. Leaching and new cropping practices have depleted the soil.
3. Bigger crop yields, resulting from heavier applications of fertilizer, are using up the available magnesium at an accelerated rate.
4. Increased amounts of potassium in fertilizers require increased amounts of magnesium to permit crops to fully utilize potash.

Many magnesium deficiencies have not yet been reported. Many growers... maybe you... are even now growing sub-par crops under magnesium deficient conditions.

Symptoms of magnesium deficiency aren't visible until heavy losses have occurred — often for several years.

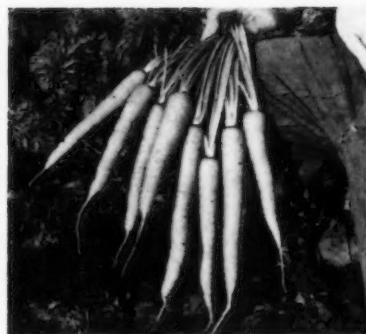
### Relative value of magnesium ingredients in fertilizers

With the growing need for magnesium in complete mixed fertilizers, the relative values of the various magnesium sources have become more and more important.

Several researchers in various states have worked on this problem. Although there is some variation in their ratings, there is almost complete agreement on two vital points.

1. The magnesium availability of such sources as Brucite, Magnesite, and Dolomite varies greatly according to soil acidity. While Brucite and Magnesite may rate 50 or 40 under acid soil conditions (pH 5), their rating may fall to 20 and 10 respectively when the soil is only slightly acid (pH 6). Under the same conditions, Dolomite may vary from 15% available to only 2% available.

2. Under all soil conditions, sulphate of potash-magnesia is 100% available. It's the safest, most available, and most widely applicable magnesium source for mixed fertilizers.



### Role of magnesium in vegetable profits

Vegetables grown in soils containing sufficient magnesium have more "snap" and brighter color. Crop matures earlier and more uniformly. Yields increase. Vegetables are larger and more uniform in size... firm for better packing and shipping.

In recent Massachusetts field tests, carrot yields increased 26% when magnesium was added to the soil. Sulphate of potash-magnesia applied to New York tomato fields produced \$130 more tomatoes per acre than fertilizers containing no magnesium.

### Phosphorus or magnesium?

Agronomists have found that what appears to be a shortage of phosphorus in some plants is really a lack of magnesium.

Although the exact relationship of these two elements has not been completely established, it is generally agreed that crops do not use phosphorus effectively unless there is adequate magnesium available.

Tests show that crops given magnesium have greater phosphorus content than crops that have not received magnesium. These crops also produced bigger yields than those to which phosphorus alone was applied.



## Protect your yields and profits with SUL-PO-MAG in mixed fertilizers

*Sul-Po-Mag is a water-soluble, fast-acting source of magnesium . . . and it stays in the soil to feed crops all season*

Truck-crop failures or losses due to magnesium deficiencies have been reported in most vegetable growing areas in the eastern half of the U. S.

This fact ranks magnesium right up with nitrogen, phosphorus and potash as a fertilizer element that must be applied regularly for top yields. As a result, most eastern fertilizer manufacturers now include magnesium-rich Sul-Po-Mag right in their mixed fertilizers.

Using mixed fertilizers containing Sul-Po-Mag is the safest and easiest way to protect against magnesium shortage. Sul-Po-Mag is water-soluble so that it goes to work fast. Yet, its granular form dissolves

at just the right rate to feed crops all season. Sul-Po-Mag is neutral in reaction and low in chlorine.

Protect your yields and profits. Be sure the mixed fertilizer you buy contains Sul-Po-Mag. Look for the SPM seal on the bag or ask for it by name.



Look for this identifying Seal of Approval when you buy. It's your assurance of extra-value fertilizer.



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## SWEETPOTATOES

### Crosscut Them!

**I**N San Bernardino County, California, a group of growers and extension workers undertook a program to improve their sweetpotato seed and achieved surprising results. They found that sweetpotatoes could be made to produce more plants. They just had to be cut right.

Normally sweetpotatoes are controlled by basal dominance; most of the slips originate from the basal end of the root. However, crosscutting breaks the basal dominance and allows shoots to grow on all segments.

The program was started in 1957 with co-operating growers, Ralph and Robert Broady, Don Cacciato and Paul Petralia, Tom Archibald, and Warren Ellis. Thousands of hills of sweetpotatoes were dug by hand, visibly diseased plants discarded, and roots of families stored separately.

Several roots from each family were cut to check for internal cork disease. Diseased families were eliminated, leaving only a half-dozen outstanding family selections.

The co-operating farmers set aside special areas in their fields which were rogued, making them as disease free as possible. Only potatoes from these blocks were used as seed in the experiment. Care was

gram, jumbo and large roots, which developed from the selected plants, created a problem because they stuck up too high in the seed bed.

These were cut lengthwise and dipped in Semesan-bel (Du Pont), recommended by Dr. Al Paulus, University of California extension plant pathologist, to prevent rotting of the seed.

In the winter of 1958-59, the extension workers uncovered an old

### STEPS TO FOLLOW IN NEW CUTTING TECHNIQUE

- Cut sweetpotato seed crosswise into two or more segments. Check cut surfaces for disease symptoms. Discard diseased roots.
- Treat seed pieces with Semesan-bel (1 pound in 7½ gallons of water). Follow directions on container for maintaining concentration.
- Plant immediately in a good moist seed bed.

experiment in producing sweetpotato plants conducted in 1931 by Ross C. Thompson and J. H. Beattie, USDA researchers at Beltsville.

Results of this old experiment indicated that seed cut crosswise produced twice as many plants as either whole seed or seed cut lengthwise. The reason field application of the practice failed was because the roots were not treated and rotted when planted.

Intrigued by the possibilities, the co-operating growers, with Purnell and Little, started a greenhouse test with Broadys' seed in January, 1958.

Some of the seed was cut crosswise, some lengthwise, and some was left whole. All the seed was treated with Semesan-bel (1 pound in 7½ gallons of water) and placed immediately in the hotbed. Results were startling, with the crosscut seed producing over twice as many plants as seed cut lengthwise or whole seed.

On the basis of this success, the Broadys crosscut 40,000 pounds of seed in 1959. They set out their hotbeds in April and May and on the first pulling of the plants had more than enough for planting their entire acreage. They also sold plants and had to throw away more than would normally have been produced if whole seed had been planted.

The Broadys also were able to eliminate 10% of their seed stock because of internal cork on cutting.

A second test was made on the Cacciato and Petralia Farm to find out what the effect would be if larger roots were cut into two, three, four, or more pieces. These pieces pro-

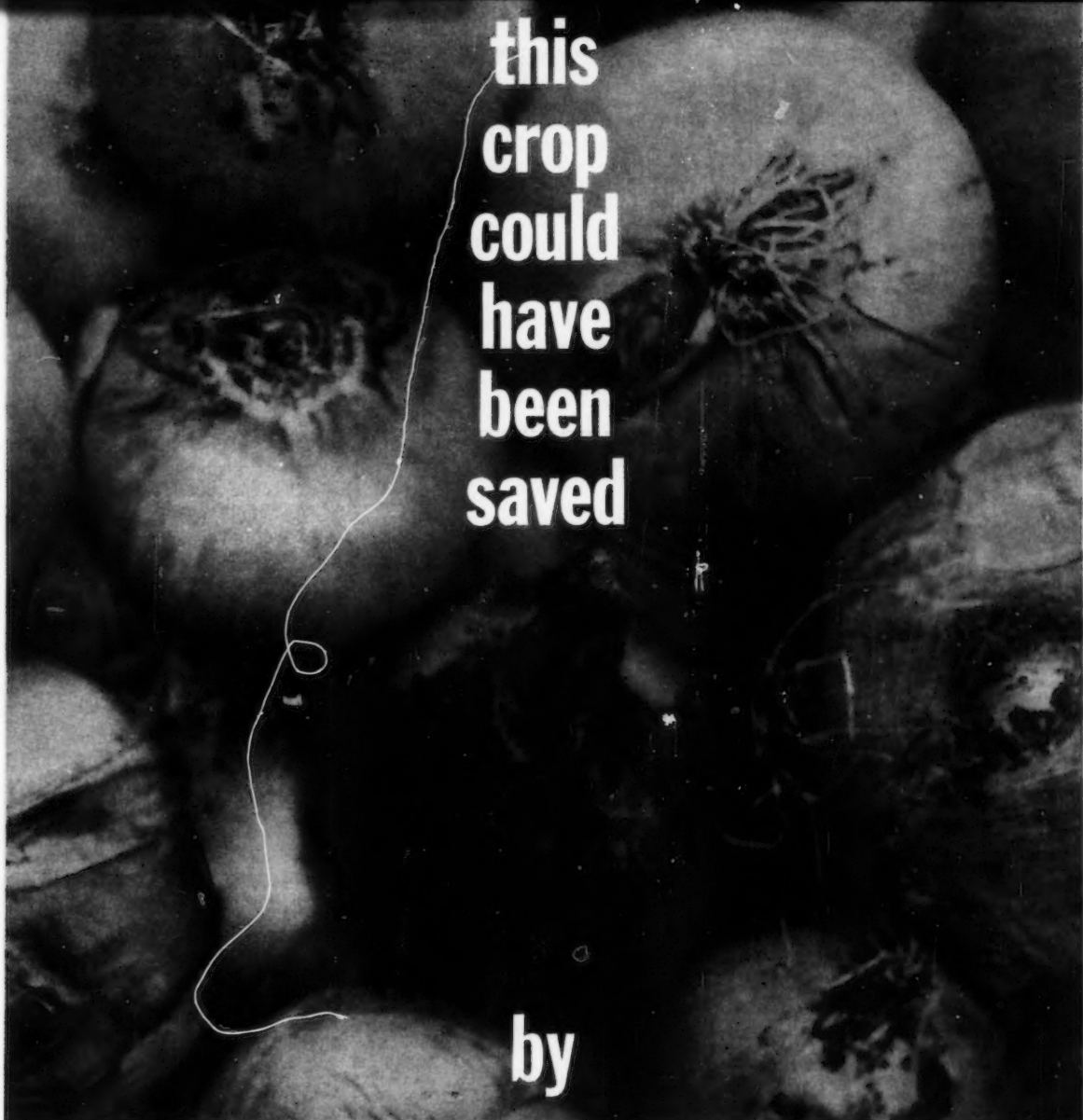


Crosscut sweetpotato seed shows high plant production on all segments. Several cuts give greater opportunity to check for internal cork.

maintained at all times to keep the family identity of the plants.

An old practice had been to select small roots for use in the hotbed. However, since diseased plants naturally produced a high percentage of small roots, this practice tended to build up a high disease level in sweetpotatoes.

Under the seed improvement pro-



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crop  
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This photo courtesy of Agrow—Associated Seed Growers, Inc.

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ions. Applied as a furrow treatment at planting time, it gives excellent control of onion maggots, including the resistant strain.

Ethion is available in a free-flowing granular formulation. It can also be used in combination with thiram to control both onion maggot and smut.

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duced excellent, thrifty plants with no rot problem.

The time and work put into their seed improvement program certainly paid off for these San Bernardino County growers and extension workers. They proved that crosscutting sweetpotato seed not only gives the advantage of more plants, but makes it possible to detect internal cork when external symptoms fail to indicate its presence.—D. C. Purnell and Frank H. Takatori.

## TOMATOES

### They Thrive Under Tents

AT NEW MEXICO State University horticulture farm, they're growing tomatoes under tents. Direct-seeded tomatoes are covered with clear polyethylene film to force early fruit production.

During tests conducted at the farm, Early Pearson tomatoes covered with the plastic tent started bearing a month before uncovered plants.

M. B. Jones, assistant horticulturist, who conducted the tests, reports the fruit was excellent in color, size, shape, and taste.

In the experiment, one 200-foot row was direct-seeded to tomatoes February 23, 1959, and covered with the clear polyethylene tent.

Soil temperatures at a depth of 6 inches ranged from 8 to 10° F. higher under the tent than in uncovered beds. Plants under the plastic survived a low temperature of 17° F. when in the seedling stage.

In May, the tent was slit to reduce day temperatures and to allow the terminals of the plants to grow through. At the time the tent was slit, the lower clusters on the plants had fruit about 1 inch in diameter but the uncovered plants were only about 6 inches tall.

Because of excessively high temperatures under the tent in late June, the plastic had to be removed to prevent scalding of the plants and to allow them to grow to proper height. Jones suggests the tent might be let down on the bed to serve as a mulch for the remainder of the season.

The plastic used in the experiment was 8 feet 4 inches wide. It was supported on bowed plaster slats spaced about 6 feet apart. The bed was irrigated by inserting short pieces of rubber hose under the end of the tent.

Several problems were encountered in using the plastic tent. Because of spring winds, the tent had to be well anchored with soil. Weed control was somewhat more difficult because the warm, humid conditions were also ideal for weed growth.

Cost of the material and extra labor involved in using the tent would probably prohibit its use for commercial acreage except where price of the early fruit would warrant the additional expense.

Jones reports the tent is easy to apply and the plants can be protected much longer than with most hot caps because the tent is taller and does not have to be removed until the plants have a good fruit set. He also noted fewer of the covered plants were lost to curly top disease.

One advantage of the tent is that in areas where tomatoes are transplanted, the plants thinned out under the tent can be used or sold.

Jones suggests that early-maturing varieties such as Early Pearson, Alpha 6, Alpha 7, or Alpha 8 be planted if the tent is used. He reports lettuce, onions, radishes, beets spinach, mustard greens, and other cool



Clear polyethylene tent covers row of direct-seeded tomatoes. Tent is supported by bowed plaster slats about 6 feet apart.

season crops could be grown to maturity under the tent.

Further tests with tent-covered tomatoes are planned at the horticulture farm this year. Jones plans to run a wire down the center of the bed and pull the plastic fairly tight over it. This will replace the plaster slats. With this method, ventilation may be provided by opening each end of the tent.

### TOMATO BARGAINING

(Continued from page 16)

would only result in severe harvest loss to our growers which will inevitably bring a sharp increase in the price of tomato products to the consumer."

The price concession didn't solve the growers' problems. When the harvest began association members had none the best of the delivery quotas. By October the tomato association directors announced the association "has dropped its traditional role as a bargaining agent for its grower members, and that from now on each grower would negotiate price for himself."

The association said it would con-

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tinue to represent growers in the field of legislation, labor problems, and preparation of research and economic data.

Production researchers estimate that grower losses spread irregularly through the California producer ranks probably ran to \$5 million on the 1959 crop.

The tomato bargaining debacle led to Alan Jensen's testimony before the House sub-committee in which he said: "We tomato growers have had no direct dealings with the retail trade buyers. However, some of the buying practices used by the group appear to be analogous to practices used by other segments of the canning industry against tomato growers in California in 1959."

Jensen continued: "Tomato growers are small businessmen who, in an effort to operate at a profit, banded together to obtain a better price and contract. While their association's effort for recognition as the sales agent for the growers generally failed, most of these canners made promises or verbal commitments to the growers that they would take their crop at harvesttime. In doing so, they encouraged the grower to plant his crop.

"In the late spring certain canners, apparently aware that total plantings were adequate to meet normal market needs, again encouraged growers to plant more, even offering financial assistance. As the harvesttime came near, the canners faced the problem of honoring their promises and commitments. Needless to say, there were many more tomatoes available than cannery capacity or the market could stand."

The tomato grower in California has been afflicted by steeply rising costs and dwindling returns. He has pushed average yield up to 17 tons an acre but most producers contend they have to sell such an average yield just to break even when the price of processing tomatoes levels off at \$21.50 a ton. And they don't often sell all they produce.

The \$21.50 price is the lowest since World War II with one exception—processing tomatoes brought \$20.40 a ton in 1954. Since 1955 tomato tonnage price has been sagging.

While confronting these pricing factors, the growers have had to pay out rising costs—up to 20% in seven years—to get their production and the future outlook on expenses is bleak.

"We need help," Jensen told the Congressional investigators. "In order to enjoy reasonable prices, farmers need to find canners earning reasonable profits. Perhaps the whole industry needs help. Perhaps what we need is legislation to protect both canners and growers from unfair trade practices."

THE END.

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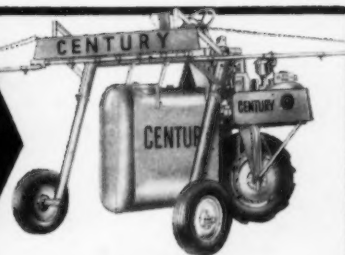
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**SOIL INJECTION:** For large areas set thin injection shanks 5 inches apart and inject VAPAM 4 inches deep into well prepared soil. A basic dosage of 40 to 60 gallons of VAPAM per acre is suggested. Dilute VAPAM with an equal part of water. Follow immediately with roller to smooth and compact the soil surface.



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beds, plant beds, or entire fields, using any one or a combination of application methods shown below. Special equipment is not required in many cases. No harmful residues are left in the soil after the fumigant disappears.

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**BED-OVER OR SOIL COVERING METHOD:** Spray or dribble VAPAM onto the soil immediately ahead of bed shaping equipment. Be sure soil is moist. Cover the VAPAM with soil to a depth of 3 to 6 inches. Roll and compact soil immediately. Use 50 to 100 gallons VAPAM per acre (about one pint per 100 linear feet of row).



**SPRINKLER IRRIGATION:** Use sprinklers with large nozzle openings to form large droplets. Run system for 10 minutes to moisten soil. In the next 10 to 20 minutes, inject into the system all VAPAM needed for the area to be treated. Use 75 to 100 gallons of VAPAM per acre. Continue sprinkling until soil is wet as deep as control is desired.

## FOLLOW TWO SIMPLE STEPS WHEN APPLYING VAPAM

**1—**Cultivate the area thoroughly and deeply. Break up clods. Let the area stand a week before you apply VAPAM, but keep your soil moist in the meantime. *This is the most important step in applying VAPAM.*

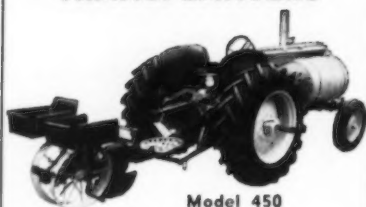
**2—**After a week, your soil is ready for VAPAM treatment. Pick a time when the soil temperature, three inches deep, is between 60° F. and 90° F. If the soil has crusted, cultivate lightly. Choose the most convenient application method

and apply VAPAM evenly over the area to be treated. VAPAM now does the rest of your work for you!

Follow directions on the VAPAM label on length of time to wait before seeding or transplanting in treated areas. The waiting period varies according to soil type and general temperature levels after you treat. With VAPAM, or any other farm chemical, always read and carefully follow directions on the manufacturer's label.



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# As It Looks to Me

By JOHN CAREW

*Michigan State University*

A SCIENTIST slowly opens the chamber door labeled VEGE-TRON. Deliberately, as if he senses the drama of his action, he withdraws a large tray loaded with firm, red, uniformly-shaped tomatoes. Cameras flash and reporters rush out to inform the world that man has eliminated the need for plants in the production of fruits and vegetables! Single tomato blossoms placed in the growth chamber 45 days earlier have developed into edible nutritious fruits without having been attached to the plant! A revolutionary fruit incubator!



Science fiction? For the present, yes. But so were moon rockets a short five years ago. Plant scientists specializing in tissue and embryo culture have already designed the first stages of this "rocket" aimed at the "moon" of plentiful world food supplies.

But who will make this startling announcement? Moscow ... Peiping ... Tokyo ... Berlin ... London? Or will it be Washington?

Who knows? One thing is certain. It will be that nation whose leaders recognize the need for continued research in the sciences of plant products even when abundant food is temporarily labeled a political liability.

Most American housewives go produce shopping only once a week. And they tend to concentrate their buying just before the weekend. Statistics show that 70% of supermarket sales are made on Thursday, Friday, and Saturday.

It is no surprise, therefore, when produce buyers place large orders for Wednesday night delivery and are conspicuous by their lack of phone calls earlier in the week.

But what happens to the tomatoes, melons, lettuce, and sweet corn that haven't been trained to ripen in this modern pattern and insist on growing over warm sunny weekends?

Some are harvested, shipped to a weak market, and drive prices down. Others are picked the following week and in their over-mature con-

dition further aggravate the market situation.

The best available answer appears in harvesting at peak quality and short-time storage in refrigerated rooms. Since chain stores are reluctant to function in this manner, the only alternative is for growers to build refrigerated holding rooms.

Short-term storage may not appear to add value to a product but it can carry a crop past two or three days of depressed prices or into a stronger market day.

■ ■ ■

Remember that carrots should not be stored along with apples and pears, nor in rooms where gasoline engine fumes have not been fully ventilated. The ethylene given off by these fruits and fumes produces a bitter compound in carrots.

Until more is learned about this interesting scientific development, it might be wise to avoid storing all vegetables near these sources of ethylene.

■ ■ ■

Many vegetable transplants started in greenhouses and coldframes are too old.

Plants are like humans; the younger they are, the quicker they put out new roots, and the less shock they suffer from moving.

With well-grown plants, you can follow this rule: when they're large enough to handle, they're old enough to plant.

Well-fertilized cabbage, cauliflower, and tomato plants grown in properly maintained greenhouses and coldframes can be ready for transplanting six weeks after seeding. Starting them earlier not only raises greenhouse heating costs, increases the possibility of damping-off diseases, but may produce plants that recover more slowly from the shock of transplanting. Furthermore, older cauliflower plants are more subject to "buttoning."

Cornell University experiments by Dr. Philip Minges have shown that yields from certain tomato varieties, notably Fireball, are highest when plants even younger than six weeks are used.

Some growers argue that it isn't logical to expect a six-week-old plant to mature as early as one four or five weeks older. But it happens. Try it.

THE END.

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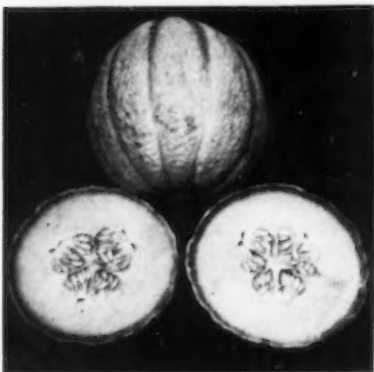
Safeguard the only eyes you have against flying objects that may blind, chemical splashes and dusts. You can wear this goggle comfortably over your regular glasses. Indirect ventilation. Clear frame, clear or green lens. When ordering, specify the AO 484A Goggle. Only \$1.70.

**TO ORDER**, just check the products you want, tear out this page and send with your check or money order to any of our distributors listed at left. They will ship anywhere in the United States with no charge for handling or postage. NOTE! Prices subject to sales tax if applicable.

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### EARLY, HIGH YIELDS

Our Early Market Hybrid is rapidly becoming very popular because of its high yields, earliness and true F<sub>1</sub> vigor. Resistant to fusarium and downey mildew. Fruits round to oval, measuring 7 inches long, 6 inches in diameter, weighing 1½ pounds. Rind tough and stands up well. Seed cavities small, excellent flavor.

¼ oz. \$2.25  
½ lb. \$30.00

Oz. \$8.50  
Lb. \$90.00

**Holmes Seed Company**  
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Made in Clear or Sun-Resistant Black

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Price Per Square Foot		Widths Available—100 Lbs. Ft. Rolls	
2 Gauge (.002).....1¢ Sq. Ft.	3, 4, 9 & 16 ft. widths		
4 Gauge (.004).....2¢ Sq. Ft.	3, 6, 10; 12; 14; 16;		
6 Gauge (.006).....3¢ Sq. Ft.	20; 24; & 32 ft. widths		
8 Gauge (.008).....4¢ Sq. Ft.	12; 16; 20 & 24 ft. widths		

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## APPLYING METHYL BROMIDE

Here are new, simple methods for using soil fumigant

**M**ETHYL bromide fumigation has proven very valuable for plant beds and greenhouses. A simplified method of application of the fumigant has been suggested by Dr. E. M. Emmert, University of Kentucky, Lexington.

A 16-penny nail is driven through the center of a piece of 1-inch board, 10x6 inches. Soft wood should be used to prevent splitting. Several nails are driven into the wooden block around the first nail to hold a can of methyl bromide upright on the point of the center nail.

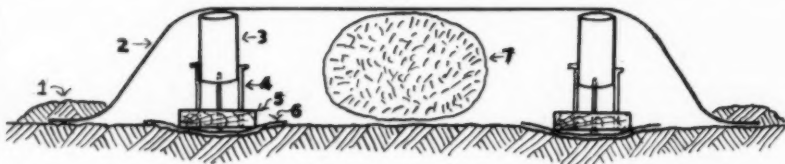
A depression is made in the soil and a piece of plastic about 18 inches square is placed in it. The wooden block is set in the plastic-lined depression. A can of bromide is placed within the nails so that the point of the center nail will penetrate the top of the can when pressure is applied. The cans should be placed alternately so they can be easily reached.

After the beds are sealed with a plastic film, it is not difficult to see where the cans have been placed.

of methyl bromide (Dow Chemical Co., producers of Dowfume MC-2) suggests the best method of application of the fumigant from 1-pound cans is to introduce it in the form of a gas. Dow feels it is more effective in this form than when it is introduced as a liquid and allowed to evaporate from trays under a plastic cover. When the full charge of methyl bromide is introduced as a gas, it is frequently possible to get by with a lower amount and for a shorter period.

The latest improvement on methyl bromide application is injecting the fumigant (Brozone—Dow Chemical) into the soil from a petroleum carrier. The area is immediately covered with polyethylene film for 24 hours to seal in the fumigant.

According to the manufacturer, methyl bromide in a petroleum carrier has given the best results of any method of application. Soil fumigation applicator and plastic tarp layer are made by Engine Parts Mfg. Co., 1360 W. 9th St., Cleveland 13, Ohio.



Sterilization of soil using methyl bromide under 4-mil black polyethylene cover: 1) soil seal; 2) polyethylene cover; 3) methyl bromide can; 4) 16-penny nails; 5) wooden block; 6) 18-inch square polyethylene lining; 7) bag of straw or anything to hold polyethylene cover off soil.

Simply go along and push on the can with the palm of the hand until you hear the bromide being released.

The top of the can is easily punctured and the methyl bromide is released without danger of loss or harm to the operator.

When treating for weeds and nematodes, Dr. Emmert suggests the use of a 1-pound can of methyl bromide per 100 square feet. For soil diseases, the dosage should be doubled.

Dr. Emmert has been treating his experimental seedbeds about noon. The following morning he removes the plastic cover for soil aeration. Planting is done the third day. For plant beds, especially when a heavy dosage is used, he suggests waiting three to four days before setting plants.

If the temperature is 60° F. or above and soil moisture is good, sterilization of the soil is about as effective as steam, Dr. Emmert said, and often the penetration is better.

One of the leading manufacturers

Methyl bromide is toxic if inhaled to any extent. It has a tear gas warning agent for several hours after discharge. Growers are cautioned to follow the recommendations of the manufacturer.

Other manufacturers of methyl bromide include Florist Products, Michigan Chemical, Miller Chemical, Niagara Chemical, and Panogen.

### Answer to YOU be the EXPERT!

(See page 18)

It was molybdenum deficiency, generally called whiptail, resulting from low soil pH. Jerry could have prevented it by liming to a pH between 6.0 and 6.6 or by fertilizing with molybdenum in the transplanting water or through foliar sprays. If he had observed it before the plants were one-third grown, a molybdenum spray (Moly-Gro Foliar Spray) might have corrected the trouble.

AMERICAN VEGETABLE GROWER



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Take to the field with confidence this spring. Slash planting costs... do better work... save valuable time, money and effort by using a versatile, dependable John Deere "30" Series Tractor and Fertilizer Flexi-Planter.

Here's power to let you work with peak fuel and maintenance economy... with minimum profit-robbing down time. The 3-pow "530" and 4-pow "630" are unmatched for gasoline or LP-Gas economy. The big-capacity 5-pow "730"

features a thrifty gasoline, LP-Gas, or the outstanding Diesel engine which holds the world's all-time tractor fuel-economy record.

Handle a wide variety of seeds with the Fertilizer Flexi-Planter. Plant at uniform depth and interval. Place seed exactly right for full, even stands... higher yields, bigger profit. Save time changing seeding rates, too. Ask your dealer to demonstrate one of these profitable John Deere Tractor-Planter Teams on your acreage.



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MOLINE, ILLINOIS



"WHEREVER CROPS GROW, THERE'S A GROWING DEMAND FOR JOHN DEERE FARM EQUIPMENT"

# GREENHOUSE CROPS

## Busman's Holiday

**G**REENHOUSE growers in Holland and other countries are much the same as those in the United States. A universal tongue or sign language exists in matters pertaining to greenhouses.

A small group of Cleveland, Ohio, greenhouse folks enjoyed a horticultural tour through Europe and the British Isles this past fall. Growing practices and management problems are similar to ours and differences in methods add to the interest of visiting foreign growers.

We visited **Peter J. Hooyman**, a young greenhouse grower in Aalsmeer, Holland, who operates a 40,000 square foot flower range. He was a 1956 I.F.Y.E. (International Foreign Youth Exchange) student to the United States and visited the Cleveland greenhouse area.

He jokes about the joint ownership with his father and the bank. That is one way a young man can get into business. Hard work and growing skill are just as necessary for success in Holland. His attractive home, young family, and good crops show his accomplishments in four years.

Greenhouse construction in Holland differs somewhat from that in the United States. In Holland the

pitch of the roof is not as steep as ours nor is the roof braced as strongly. Roof bars seldom have drip grooves. Ventilators are operated from outside at the end so that it is not necessary to go into each house. Newer construction can be seen that corresponds to United States style. Some aluminum ranges are replacing the wartime Dutch light houses.

Heating by individual hot water coal-fired boilers is giving way to automatic coal and oil systems. This change-over was seen in Holland, France, and England.

Transportation for most Dutch growers is the dependable bicycle. You can travel through West Holland by boat providing you have a good canal map. Little foreign sport cars are everywhere.

**Greenhouse workers** in Holland must have horticultural training. Mr. Hooyman has one full-time man and furnishes him a home on the place. A 16-year-old boy works afternoons and attends horticultural school in the morning. The average worker's weekly pay is 100 guilders for five and one-half days, or about \$26.30. Prices are in line with their standard of living.

Aalsmeer is the second largest greenhouse area in Holland with 400



Trainees from greenhouses in other countries at work on greenhouse in Copenhagen. "Foreign" training is encouraged.

acres. The Westland vegetable area has 7500 acres. Total glasshouse acreage is 12,000 acres, two-thirds of which is heated.

The city is famous for its flower market and auction block. All cut flowers are sold to wholesale buyers by noon, then shipped throughout Europe and the British Isles.

**English and European** growers encourage their sons to work in other countries for six months to a year. Peter Hooyman and his two brothers have worked at farms in Germany and the United States. At a Copenhagen greenhouse, trainees came from growing firms in Germany, Holland, England, and Scotland. They all say there is more to learn in other countries than how to grow greenhouse crops.—*Fred K. Buscher, Cuyahoga County (Ohio) Agricultural Agent.*

## VAL-PEAT® POTS

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**VAL-PEAT POT ORDERS 150 LBS. AND OVER PREPAID IN U.S.A.**

(Packed in original cartons only.)

### VAL-PEAT POTS—ROUND SIZES

Inside Top Dimension of Pot	Quantity	Number Pots per Carton	Approx. Wt. of Carton	Price per 1000
S-1428A 2 1/4-in. Diameter	2,000 to 18,000	2000	28 lbs.	\$ 7.75
Round	20,000 to 74,000			7.25
S-1428B 3-in. Diameter	76,000 and over			6.75
Round	1,000 to 9,000	1000	27 lbs.	13.75
S-1428C 4-in. Diameter	10,000 to 49,000			12.75
Round	50,000 and over			11.50
S-1428D 4-in. Diameter	500 to 2,000	500	33 lbs.	28.75
Round	2,500 to 10,000			26.25
S-1428E 4-in. Diameter	11,000 and over			24.75
Round	500 to 2,000	500	30 lbs.	28.75
Azalea	2,500 to 9,500			26.25
	10,000 and over			24.75

### VAL-PEAT POTS—SQUARE SIZES

Inside Top Dimension of Pot	Quantity	Number Pots per Carton	Approx. Wt. of Carton	Price per 1000
S-1428 1 3/4-in. Diameter	2,500 to 17,500	2500	28 lbs.	\$ 6.90
Square	20,000 to 70,000			6.40
	72,500 and over			5.95
S-1428F 2 1/4-in. Diameter	2,000 to 18,000	2000	39 lbs.	10.50
Square	20,000 to 74,000			9.75
	76,000 and over			9.00
S-1428D 3-in. Diameter	1,000 to 9,000	1000	38 lbs.	17.25
Square	10,000 to 49,000			16.00
	50,000 and over			14.75

### LITE-WEIGHT No. 10 TWO SQUARE SIZES—2 1/4 and 3-inch

For some growing purposes, these lighter weight pots are preferred.

Inside top Dimension of pot	Quantity	pots per Carton	Wt. of Carton	Price per 1000
2 1/4-in. Square No. 10	2,500 to 17,000	2500	35 lbs.	\$7.50
	20,000 to 72,500			7.00
	75,000 and over			6.50

Inside top Dimension of pot	Quantity	pots per Carton	Wt. of Carton	Price per 1000
3-in. Square No. 10	1,000 to 9,000	1000	32 lbs.	\$14.50
	10,000 to 49,000			13.25
	50,000 and over			12.00

**VAUGHAN'S SEED CO.**

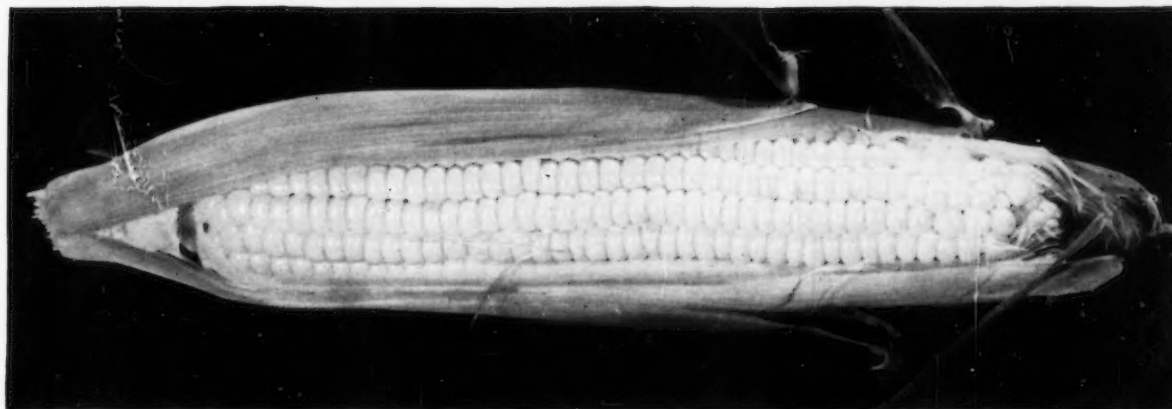
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NEW YORK 13, 85 White St.**

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Tight husk, with good tip coverage, helps limit ear worm attacks. Yields a very high percentage of U.S. #1 ears. Ears are long, very uniform, cylindrical, bright yellow, highly desirable for both shipping and local market. Has excellent eye appeal with bright ear color, and long, dark green flags and husk. Excellent flavor. Ears are  $8\frac{1}{4}$ "– $8\frac{1}{2}$ " long,  $1\frac{3}{4}$ " in diameter, with 14 rows, excellent tip fill. 7-8 foot plant is very vigorous with good stalk strength, widely adapted, does well even under adverse conditions. Clean, with high ear placement that's ideally adapted to mechanical picking. Developed and introduced by NK. Average maturity: 85 days.

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*Minneapolis 13, Minnesota*





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\* **Knee Boots** Black Heavy Cleats \$3.95  
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many more crew supplies.  
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best crop yields with billions of friendly organisms,  
hormones, vitamins, minerals, BIOTIN. (Users re-  
port "Better than fertilizer.") Just apply to seed.  
More bigger, better potatoes or your money back.  
Trial pkg. for 9-18 bu., \$2.95 p.p.d. Dealers or  
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**GET FREE BOOK**—Ideal family income  
producers—Yields 650 to 900  
quarts—Allen's new berry book tells best  
varieties. How to grow them—no expe-  
rience necessary. It's free—write for your  
copy today.

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# POTATOES

## Resolutions for 1960

**A**T the 11th annual meeting of Na-  
tional Potato Council held in  
Chicago, the resolutions committee  
submitted 18 resolutions, including  
the recommendation that a permanent  
industry committee co-operate with  
USDA in developing potato seasonal  
acreage guides.

Other resolutions reaffirmed the  
council's policy to secure legislation  
which would require the labeling of  
all potato packages for fresh food  
use with weight, grade, state of  
origin, and name of packer; recom-  
mended that proper authorities in-  
vestigate practices of certain labor  
organizations regarding the collec-  
tion of unwarranted unloading  
charges; stated the council's opposi-  
tion to the use of mandate to regu-  
late the conditions of employment of  
migrant agricultural workers; and  
commended efforts to form producer  
bargaining associations.

A. E. Mercker, 542 Munsey Bldg.,  
Washington 4, D.C., is executive di-  
rector of NPC.

## Group Potato Marketing

**T**ODAY'S successful potato grow-  
er is one who is able to recognize  
and adapt himself to our changing  
market situation. Today the retail  
food business is in the midst of a tre-  
mendous revolution. Large-volume  
buying is becoming the rule. A mere  
10% of the food retailers did over  
67% of the total food business last  
year. The trend is for an even smaller  
number to get an even bigger share  
of the total business in the future.

The large chains responsible for  
most of the retail selling to house-  
wives are represented by buyers deal-  
ing on the farm side, who demand a  
dependable and continuous high-vol-  
ume supply of uniformly graded  
produce. They want to deal with as  
few individuals as possible in lining  
up their needed supplies. The grow-  
ers who can furnish this kind of  
service will get the business. Un-  
fortunately, few individual growers  
are large enough to do this.

In Wisconsin's Langlade County,  
where over 20% of the state's potato  
crop is grown, a group of growers  
decided to do something about adjust-  
ing to the changing market situation.  
Just two years ago Al Tschudy,  
Langlade County agricultural agent,  
called in a representative group of the  
county's growers to discuss potato  
problems. The group decided that  
marketing was their biggest head-  
ache. They felt that production

problems were fairly easy to solve  
compared to getting and holding good  
markets for their potatoes.

By the fall of 1958, County Agent  
Tschudy, with the aid of marketing  
specialists from the Wisconsin Col-  
lege of Agriculture, had stimulated the  
formation of a group-marketing or-  
ganization for selling potatoes from  
the area.

The Antigo Potato Growers Inc.,  
is a "modified"-type corporation sim-  
ilar to a co-operative. The group dif-  
fers from a true co-operative-type  
organization mainly in that voting is  
on an acreage basis rather than the  
typical "one member-one vote" sys-  
tem. The principal aims of the organ-  
ization are: 1) orderly and efficient  
marketing of each member's crop; 2)  
quality improvement and improving  
the market reputation for Wisconsin-  
grown potatoes; 3) increasing the  
market power of member producers;  
and 4) improving the financial re-  
turns of member producers.

In the short span of one marketing  
season the group has become a key



Manager Joe Boe, left, and County Agent Al  
Tschudy display Antigo Royal Ace and Royal  
Queen packs.

supplier of potatoes from the area.  
They sell under one standard set of  
brands—Antigo Royal Aces, Kings,  
and Queens. All potatoes shipped are  
state-federal inspected. Top brands  
are restricted to varieties known to  
have good table quality character-  
istics. The group is concentrating on  
production of Red Pontiac, Katahdin,  
Russet Sebago, and Russet Burbank  
varieties.

The group recognized at the be-  
ginning that a good, well-paid man-  
ager would be a vital necessity for  
success. They hired capable, experi-  
enced Joe Boe to handle sales and  
manage their business affairs. This  
season they have added an assistant  
manager to their sales staff.

Growers pay marketing charges  
through a special bag sales plan. Bags  
are purchased in volume lots by the  
organization and sold to members at  
a price which will provide 10 cents  
per hundredweight of packed pota-  
toes above the cost of the bags. This  
charge provides for financing the  
sales operation. Any profits accu-

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100% safety pilot-automatic control  
Directional heat flow  
Blower attachment available  
Being used with outstanding results  
Free greenhouse plans sent on request



Blower Attachment



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Also Gang Planters: One, Two, Three and Four Rows. Write for Folder.

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mulated under this system are paid back pro-rata to growers at the end of each year.

At present the group has 30 grower-members representing over 3000 acres of production. Grower size ranges from 40 to over 300 acres of potato production annually. In addition, to meet extra volume needs, the organization handles potatoes of non-members on a regular brokerage fee basis.

In spite of the generally poor market season nationally in 1958, the Antigo group operations were a financial success. Members were pleased to find that their crop was marketed for them at less than 10 cents per cwt. and at a cost a good deal less than they had been accustomed to paying for brokerage in the area. Besides, they got comparatively better market prices for their crop. In 1959 the organization leased a central packing shed. This is to aid in quality control and is proving particularly helpful for smaller growers who don't have modern washing and grading facilities on their own farms.

Members are finding that one of the big advantages to group marketing is that they no longer have to spend a lot of their time trying to market their crop. They can concentrate their efforts on doing a better job of production. Through group marketing they hire the marketing job done for them—yet they have control and get maximum returns.

The time they save can be spent improving their production efficiency, increasing the size of their growing operation, and improving potato quality. In these ways they can add substantially to their individual business success.

These Wisconsin growers have worked out a way to effectively adjust themselves to the changing market situation of today.—John A. Schenemann, University of Wisconsin, Madison.

## POTATO VARIETIES

(Continued from page 13)

color, and foundation seed from the increase of this selection has become the standard of the Porto Rico type.

Production of the sweetpotato greatly increased in Louisiana during 1934 as a result of better seed stock and other states became interested in a similar program.

In 1937, techniques were developed by Miller to induce the sweetpotato to bloom and set seed in other areas of the United States. This stimulated research in many states and USDA and resulted in a co-ordinated breeding program in 1939.

In 1948, Louisiana established a

foundation seed farm where 15,000 to 16,000 seedlings and around 2000 bushels of foundation seed are grown each year. The foundation seed is sold to certified growers, who, in turn, sell it to the commercial industry. The present research program with this potato incorporates the breeding for greater yielding ability, higher nutritional values, such as vitamin A, more uniform shape, better storage ability, disease resistance, and varieties for processing.

Some of the major varieties that have come out of the breeding program with white potatoes are Katahdin, Sebago, and Kennebec, which

## SAWYER JOINS COLUMBIA-SOUTHERN

The appointment of Dr. Richard L. Sawyer of Cornell University as consultant was announced recently by Columbia-Southern Chemical Corp. Dr. Sawyer has taken a six-month leave of absence from Cornell to work on the firm's program to develop the application of chloro IPC for sprout inhibition of potatoes. Dr. Sawyer gained nationwide recognition for his research on potato sprout control at Cornell where he has been on the faculty since 1953.



were released by USDA, and Pontiac, Red LaSoda, Warba, Cherokee, Dazoc, and many others have been released by co-operating state stations.

Among the sweetpotatoes, such varieties as Unit I Porto Rico, Maryland Golden, and Orlis were released as the result of the program of selecting superior mutations; while from the actual breeding program have come Goldrush, Allgold, Acadian, Nemagold, Apache, and many others yet to be named.

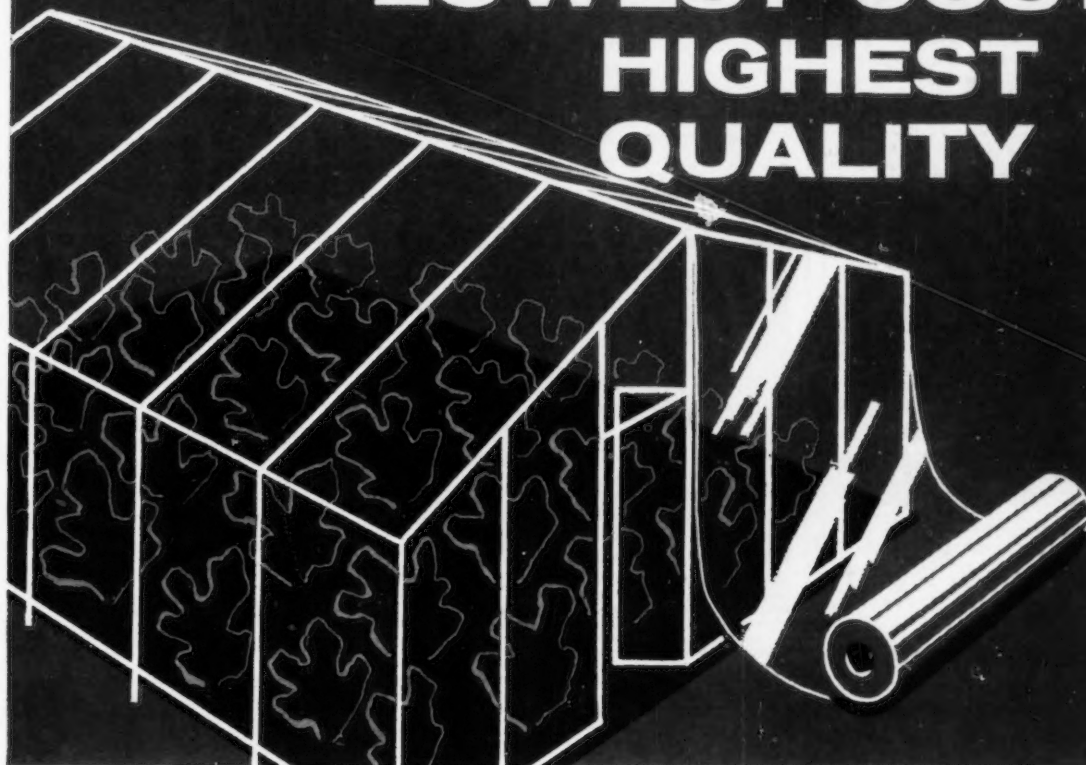
With both potatoes, disease resistance has been one of the major factors considered. Of the white potatoes released in that program, the Cherokee is resistant to both blight and common scab diseases. As for sweetpotatoes, the Louisiana station has a yet unreleased seedling, 1-80, that carries resistance to soil rot, wilt, and internal cork. Most of the new introductions are resistant to one or more diseases. For instance, Goldrush is resistant to fusarium wilt, Acadian to soil rot, and Nemagold to soil nematodes.

Great progress in potato improvement has been made within the past 30 years as a result of the breeding programs. However, since both potatoes play a major role in helping to feed the ever-increasing population of the world, it is felt that much more needs to be accomplished to perfect breeding techniques, complete immunity to diseases, and better market and table qualities. THE END.



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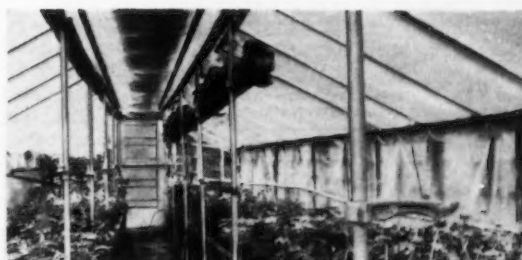


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**FUEL BILLS CUT 40%.** Conventional glass greenhouses lined with GER-PAK Film save approximately 40% in heating costs. GER-PAK lining also serves as protection to avoid urgent repairs should glass be damaged by the elements.

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## NEW!

## F<sub>1</sub> HYBRID TOMATOES

**ALPHA 88**  
 rated best tomato in 1959  
 Virginia Truck Experiment  
 Station trials... and

**ALPHA 417**  
 first available resistant  
 to Nematode Root Knot,  
 Fusarium wilt and grey  
 leaf spot.



**ALPHA SEEDS**  
 POST OFFICE BOX 1042  
 LOMPOC, CALIFORNIA

# NJVGA NEWS

## Convention Notes

**I**N RECOGNITION of their 25th anniversary, USDA presented a citation to National Junior Vegetable Growers Association for "outstanding achievements accomplished through a continually expanding educational program to help prepare young people for careers in horticulture."

The citation was presented during the annual convention held in Washington, D. C., in December. Over



NJVGA President William Monfort, Jr. (second from left) accepts USDA citation recognizing NJVGA's 25th anniversary. With Monfort are (left to right) Prof. Grant B. Snyder, University of Massachusetts, chairman, NJVGA board of trustees; Monfort; Acting Secretary of Agriculture True D. Morse who made presentation for Secretary of Agriculture Ezra Taff Benson; and Dr. Frank P. Cullinan, associate director, Crops Research Div., ARS, who presided at the ceremonies.

450 members from 26 states attended the four-day session.

**National winner** of Production and Marketing (Fresh Market Section) contest was G. Roger Mumma, Barboursville, W. Va. The 19-year-old West Virginia University sophomore made his winning record on growing of sweet corn—selling \$1950.95 worth of produce, less \$936.15 for costs, for a total profit of \$1014.80.

Ruth Skinner, 16, Union, Miss., grew 61 varieties of vegetables on 1/2-acre to become Southern Regional winner.

Western Regional winner was Joyce Nadine Selby, 17, Golden, Colo. Corn was her big crop.

James Victor Parochetti, 19, Spring Valley, Ill., was Central Regional winner. His vegetable produce was sold to local retail stores.

Northeast Regional winner Henry Glenn Taber, 16, Spencerport, N.Y., made a profit of \$270.16 on his 2-acre project.

Robert Green, 20, Rushville, N. Y., was national winner of the Canning Crops project sponsored by NJVGA in co-operation with National Can-

ners Association. Green grew 14 acres of beets for Comstock Foods, Inc., Rushville, N. Y. He had a total yield of 161.51 tons based on an average yield of 11.5 tons per acre. This paid him a net profit of \$1123.34.

**The Varieties Trials** contest, sponsored jointly by NJVGA and W. Atlee Burpee Company, was won by Ed Leonard, Elyria, Ohio. Leonard made a profit of \$1035.66 from 2 1/2 acres of tomatoes. He raised six varieties—Kokomo, Jubilee, Morton, Texto, Pinkshipper, and Homestead.

The top Future Farmers of America team from Indiana—Harry Asperger, Leonard Alexander, and Darwin Brewer—was awarded the National Grange Trophy. New York's George Patrick was top individual.

The plaque presented by National Committee on Boys and Girls Club Work was awarded to the Massachusetts 4-H team of John Keller, Alan Kreuger, and Helen Patt.

Winner of the Snyder Trophy for the highest scoring team in the open division was Indiana. Team members were Fred Tieman, Clifford Minier (also top individual in the open contest), and Stanley Minier.

**National officers** for 1960 are William Lorenz, Chicago Heights, Ill., president; Carol Ann Greene, Huntersville, N. C., vice-president; and



Winners of Demonstration contest, Ora Schade, Golden, Colo. (center), and Barry Lowe, Morrison, Colo. (right), are congratulated by Maine NJVGA Advisor Bob Paulson. Second place winner was Carleen McGill, Germantown, N.C. Edith Edwards and Donna Montgomery, Marksville, La., were third place winners in the Use Division.

James Parochetti, Spring Valley, Ill., secretary. Elected members of executive committee were Duane Francis, Moravia, N. Y., Sandy Karn, Tyner, Ind., Peggy Percival, Deer Lodge, Mont., and William Monfort, Jr., Dawson, Ga.

An Achievement Award was presented to outgoing president William Monfort, Jr., for his record in competition and his leadership, civic activity, and personal qualities.

For information on NJVGA write Grant B. Snyder, French Hall, University of Massachusetts, Amherst, Mass.

AMERICAN VEGETABLE GROWER

## Do YOUR Friends a Good Turn . . . FREE!

You like to do your friends in the vegetable business a "Good Turn". So just fill in the names and addresses of some of your vegetable growing friends in the space below—and we will gladly mail them FREE a copy of AMERICAN VEGETABLE GROWER with your compliments. Absolutely no obligation, absolutely no charge to them or to you.

### AMERICAN VEGETABLE GROWER Willoughby, Ohio

Yes—I agree it's nice to do "good turns" to friends. So please mail a free copy of AMERICAN VEGETABLE GROWER with my compliments to the persons listed below.

If possible send the Feb., 1960 issue

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AVG-2

## BOOK REVIEW

*Potato Processing*, by William F. Talburt and Ora Smith, \$9.50. The AVI Publishing Company, Inc., Westport, Conn., publishers.

Members of the potato industry have estimated that in the near future one-half of the potato crop will be utilized in processed form. *Potato Processing* is a timely addition to every grower's library.

Authors Talburt and Smith, in collaboration with a group of specialists, thoroughly discuss processing of frozen, dehydrated, and canned products, methods of selecting potatoes for processing, treatment of storage and tuber diseases, and storage and handling problems.

Both men are eminently qualified. Dr. Smith, professor of vegetable crops, Cornell University, is research director of Potato Chip Institute International. Mr. Talburt is chief of USDA's Western Regional Research Laboratory.

*Raising Vegetables* by G. W. Ware and J. P. McCollum, two outstanding authorities in the field of vegetable growing, \$6.50. The Interstate Printers and Publishers, Inc., Danville, Ill., publishers.

*Raising Vegetables* is a manual, a handbook, and a one-volume encyclopedia combined. It has two main divisions: *Principles* which deals with such things as culture, soil management, cultivating, irrigating, and marketing; and *Practices* which gives comprehensive information on specific vegetables. It is so complete that the index alone requires 10 pages.

Author Ware, agriculturist with International Co-operation Administration, was formerly in charge of University of Arkansas Fruit and Truck Branch Experiment Station. Dr. McCollum is associate professor of vegetable crops, College of Agriculture, University of Illinois.

## YEARBOOK AVAILABLE

MAIN theme of *Food*, the 1959 Yearbook of Agriculture is—for good health, eat some of the basic foods every day. Extensive tables list calories, vitamins, and recommended food allowance according to age groups.

A limited supply of the yearbook is distributed among members of Congress. A free copy may be available upon request to your Congressman. Copies may be purchased at \$2.25 each from Superintendent of Documents, Washington 25, D. C.

## This Year . . . plant "Seneca" Sweet Corn Hybrids



"SENECA BEAUTY" is a wonderful, new early corn . . . so tender and sweet it seems to melt in your mouth! Highly productive. Fine appearance at market or stand. Robson's famous "Seneca" sweet corn

hybrids have been grown successfully all over the world. Make a trial planting in your garden this year.

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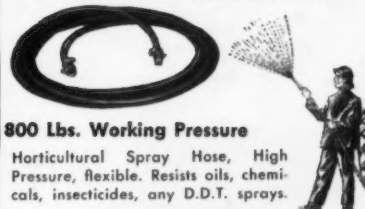
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Special value—shipped immediately



### 800 Lbs. Working Pressure

Horticultural Spray Hose, High Pressure, flexible. Resists oils, chemicals, insecticides, any D.D.T. sprays.

Couplings are attached on each length of hose that will fit all high-pressure sprayers.

Shipments made C.O.D. plus freight post paid if payment sent with order.

### SATISFACTION GUARANTEED or your money refunded

CHOICE OF LENGTHS	HOSE INSIDE DIAMETERS		
	3/8"	1/2"	3/4"
25 ft.	\$10.75	\$12.65	\$17.75
50 ft.	19.75	23.40	32.75
75 ft.	28.75	34.15	47.75
100 ft.	37.75	44.90	62.75

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# 1960

## SPRAY COMPATIBILITY CHART

### THE ALL NEW 1960 CHART

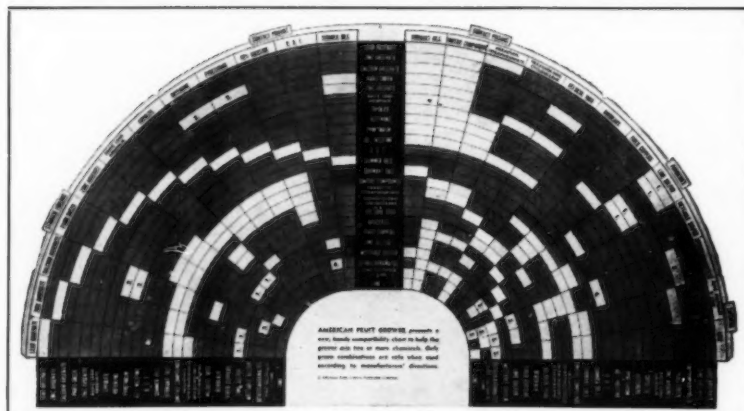
#### Bigger and Better

- Compatibility of Growth Regulators
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**ORDER YOUR  
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SPRAY SAFETY  
CHART  
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It shows every grower  
should have—following  
the safe, sure way to  
use spray materials.  
See each.



### WHAT'LL IT MIX WITH?

Larger and completely revised for 1960. For economical and safe spraying, the compatibility of the various organic insecticides and fungicides is a must. AMERICAN VEGETABLE GROWER has again produced an ingenious spray compatibility chart which tells the grower at a glance just what chemicals will mix safely. Printed in 3 colors on HEAVY, LONG-LASTING ENAMEL STOCK, it will guide you through the spraying season ahead. Also the important companion Spray Safety Chart which has been developed to help you in the safe, sure way to use these spray materials.

Order both charts—a 70c value—for only 60c. This offer good only in U.S.A. and Canada. Quantity prices on request. Coin or your check must accompany each order.

#### AMERICAN VEGETABLE GROWER Willoughby, Ohio

Enclosed is money or my check. Send ..... compatibility charts and/or ..... companion spray safety charts to:

Name .....

Address .....

City ..... State .....

## AN ACRE A DAY

(Continued from page 15)

flow of tomatoes at all times. A variable speed drive on this pacing belt enables the foreman to regulate the flow according to the condition of the fruit.

All of the sizing of fruit is done mechanically, using perforated belts. The height of drop has been kept to a minimum. To reduce damage still further foam rubber and plastic were used at all crucial points in the line.

One of the greatest advantages of an even flow of produce over the longest possible portion of the year is in the field of marketing. The customers who buy the produce from this ranch know they can depend on a uniform supply of uniform quality at all times. When the market is flooded, produce from this ranch will sell while that from less reliable producers or "plungers" may go begging. It means that this ranch will always have produce to sell when supplies are short and price is high.

With uniform production, labor requirements are unusually stable throughout the entire year as compared with the average vegetable ranch. Efficient division of labor can be achieved so that little time is lost in training a crew to do a new job.

The total labor force consists of about 80 workers, who are housed in pleasant, permanent quarters on the ranch. Not only does the labor force benefit from steady employment but the management is benefited as well. There are few frantic peak periods of activity or prolonged periods of inactivity such as are found on the usual vegetable ranch.

Archie attends nearly all of the important local meetings at which recent research work is discussed. He is one of the most faithful and reliable co-operators of the University of California Extension Service in San Diego County. For years he has conducted co-operative trials with Bernarr Hall, San Diego County vegetable farm advisor, testing latest varieties of lettuce, as well as carrying on tests with fertilizers, spacing, and other cultural practices. Several extension meetings have been held on his ranch to demonstrate some new phase of production important to all of the growers in the area.

Perhaps the most important aspect of this system of uniform production lies in its wholesome effect on the stability of the market. If more and more producers of vegetables were to follow a pattern similar to this we would certainly not be faced with the tremendous fluctuation of supply with the resulting fluctuation in price which has always plagued the vegetable industry.

THE END.



## when you add TRIANGLE BRAND COPPER SULPHATE to your fertilizer.

Vegetables rich in minerals cannot be grown in copper-deficient soil. In addition, they are less appetizing and thus do not appeal to the consumer. Proper dosages of Triangle Brand Copper Sulphate—added to your fertilizer—will provide this vital soil mineral. More abundant growth of healthier and more flavorful vegetables is assured with use of copper sulphate in your fertilizer. This results in higher market values and greater profit. Don't forget to use Copper Sulphate in Bordeaux sprays and dusts for dependable control of common vegetable diseases.

Control  
POND SCUM  
and ALGAE in farm  
waters with Triangle Brand  
Copper Sulphate. FENCE POST  
Treatment with Triangle Brand  
Copper Sulphate prevents  
decay and termite damage.

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uses of copper  
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Construction



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Ideal Grower Sizes—11, 20, and 25 ft. wide. Lengths in multiples of 8 ft., starting at 32 ft.

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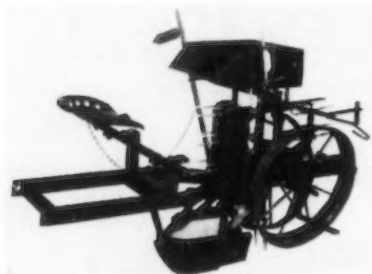
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IRVINGTON, N.Y.  
DES PLAINES, ILL.

## Do Not Disturb

Because of the many advantages of using peat pots for an early start for tomatoes, sweet potatoes, cucumbers, and many other vegetable crops, this has become a widespread practice in the commercial vegetable industry. And now to refine this process even further, there is a new machine which automatically transplants the peat moss pots simultaneously with an application of



water or a starter solution, giving them a faster start with no disturbance of the root section. The transplanter is available with attaching brackets for all mounted tractors, and is believed to be the 'only one of its kind in production today. It would be worth your while to write H. B. Poll, of the Holland Transplanter Co., 341 E. 7th St. at Fairbanks, Dept. A, Holland, Mich., and ask him to send you complete details on this brand new transplanter.

## Safety First

Every day in some part of the country, a grower is being made ill through the use of toxic organic spraying chemicals. In almost every case, these illnesses can be attributed to poor safety precautions. The grower does not wear protective clothing and does not use a respirator. It's becoming more and more important for growers to use respirators when spraying. The type shown above meets the recommendations of USDA for protection against harmful organic chemicals such as insecticides, herbicides, and pesticides. It is furnished with six dust filters and two chemical cartridges to provide eight hours continuous or accumulated protection. The filters and cartridges are easily replaced. Why not protect yourself and get the latest information on this proven respirator? Write Bob Moore, Willson Products Div., Ray-O-Vac Co., Box 160, Reading, Pa.



# New for You

## Ferti-Irrigation

Why do only one job when you can be doing two at the same time? And when you can save money along with saving time, this becomes an even more exciting prospect. I'm referring to the practice of fertilizing while you are irrigating. It has been proven conclusively by growers in California that doing these two



operations at one time cuts applications and labor costs, is better for your vegetable crops because there is less field traffic, and gives excellent control of fertilizer application along with the important element of timing in connection with the stage of your crop growth. The sprinkler systems are engineered to insure an even distribution of water and, thus, there is an even distribution of fertilizer. If you are not already employing this method of fertilizing, you should give serious thought to installing a unit. Why not write to Peter Dragon, Dragon Engineering Co., 626 McClary Ave., Oakland 21, Calif., and ask him for details?

## Better Heat—Better Plants

Ten years ago, commercial vegetable growers, university horticulturists, and heating engineers recognized the advantages in greenhouse

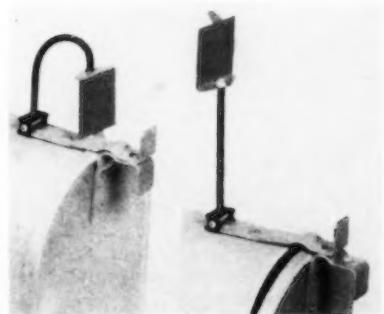
heating through the use of space heaters. Heating from above gives your plants a natural growing environment, providing air circulation and cooler soil. Growers who are using the overhead method have in every instance reported plant growing benefits. Plant mold and fungus



diseases are controlled, water left on foliage is quickly absorbed, and cooler soil produces stronger plants and greater yields. Include this item in your new greenhouse plans or convert your greenhouse from the old pipe method to the Modine system as old pipes wear out. For all the facts on this grower-proof system of space heating, write A. J. Swartz, Modine Manufacturing Co., 1578 DeKoven Ave., Racine, Wis., and ask for the booklet entitled "Nature's Way."

## Mail Call

Now that winter's here how many times have you trudged through snow and ice to the mailbox only to find the box empty? I heard of a unique new device which tells you at a glance when you have mail. The device, called "Mail-Call," is easily



clamped to the top of your mailbox and automatically springs up when the postman opens the door. After getting your mail, you simply reset it for the next delivery. For further details write to Joe Papps, Grand-Jo Industries, P. O. Box 22, Detroit 23, Mich.



## FIELD GREENHOUSES

(Continued from page 17)

tened; when wider rafter spacing is used, the plastic can be nailed and the end doors used for ventilation.

About 6 inches of plastic should lie in a shallow trench along the edges of the field house. This is covered with soil 3 inches deep in cold weather. Narrow strips of black plastic should be used to keep down weeds along the edges. If self-watering is to be done the trench should not be completely filled with soil.

The field house crops can be watered with inexpensive traveling sprinklers, such as Rain King (Model K20), manufactured by Sunbeam Corp., 5600 Roosevelt Rd., Chicago 50, Ill. These distribute water evenly and can be set to water as wide an area as desired. A small water motor winds up a steel tape and causes it to move at the correct rate for the width being watered.

Plants can also be watered by a trench on each side of the center path. Watering is quite effective if the ground is sloped and the trench is covered with thin black plastic. A hose is laid in the high point of the trench, and the water runs through holes in the plastic into the trench.

A system of trenches can be used to run rain water back into the house.

A second dead air space is necessary to protect plants where near zero temperature occur. The plastic is put on wire—No. 9 is stiff and resists water pocketing well. Some water accumulates on the plastic in cold, damp weather even if no leaks are present. The wire wickets, about 2½ to 3 feet high, are placed every 3 to 4 feet.

Two 8-foot sheets of ¾-mil polyethylene are used for low crops or two 10-foot sheets for high crops. The first layer is placed loosely over the wires. The second layer is pulled tight and should be pinned to the wires. The front sides should not be pinned so the layers can be laid back in mild weather. The edge of the plastic should touch the soil on both sides of the wickets in cold weather. These inner layers should last several years with proper care.

About 30 field houses are in operation outside Lexington, Ky. Bibb and leaf lettuce have produced well and have brought good prices.

The first lettuce, ready about the end of March, brought \$3 for 10 pounds of leaf and \$2.50 for 5 pounds of Bibb. Bibb stayed about the same price in April but leaf

brought \$3.50. This income was about 50 cents a square foot for the field houses.

In June, tomatoes brought 30 cents a pound. While only a few pounds per plant were sold for this price, the income was also about 50 cents a square foot.

The framing, including labor, was about 7 cents a square foot. Plastic for all layers was about 5 cents a square foot. The crop paid for plastic, framing, and labor and left 82 cents a square foot for other costs which were only a small fraction of the total, thus providing a wide margin of profit. THE END.

## APPOINT HATTAWAY

THE Florida Division of Food Machinery and Chemical Corporation, Lakeland, Fla., has appointed James E. Hattaway sales engineer for FMC



Hattaway

fresh fruit and vegetable packing equipment. Hattaway will serve North and South Carolina, eastern Georgia, and the eastern half of Tennessee and Kentucky. He will make his headquarters in Inman, S. C.

## DuPont's Weatherable MYLAR®

### The Strongest, Longest Lasting Plastic for Greenhouse Use!



"Mylar" covered range of Mr. Robert Bradford of Blue Springs Nursery, Huntsville, Ala. The range was built from George J. Ball, Inc. No. 48 Plastic House Plans. Although the houses have been up but a short time, Mr. Bradford indicates he is well pleased with "Mylar" and the ease in which the range was constructed following our plans. FREE PLANS ARE AVAILABLE UPON REQUEST!

Dramatic new improvements by DuPont "assures Weatherable 'Mylar' to last 4 to 7 years!" Four-year life applies to roof surfaces and seven-year life to vertical surfaces, when properly applied.

Note these important features: Strength is amazing . . . 1/3 that of steel, 9 times stronger than Polyethylene . . . highly resistant to tearing . . . clear as glass . . . holds up perfectly under temperature extremes.

New Type W-1					
Designed for one side exposure to the sun—recommended for greenhouse glazing.					
ROLL SPECIFICATIONS					
100-ft. Roll			1000-ft. Roll		
Wt. per	Sq. Ft.		Wt. per	Sq. Ft.	
Width	Roll	Per Roll	Width	Roll	Per Roll
42 in.	15 lbs.	350	42 in.	130 lbs.	3500
48 in.	17 lbs.	400	48 in.	150 lbs.	4000
51 in.	18 lbs.	425	51 in.	160 lbs.	4250
PRICES PER SQUARE FOOT					
300 to 2999 sq. ft. . . . .			1000-ft. rolls		
			3000 to 23,999 sq. ft. . . . .		
			24,000 sq. ft. and up. . . . .		

Type W-2					
Designed for exposure to sun on either side—recommended for cold frames and other reversible structures.					
ROLL SPECIFICATIONS					
100-ft. Roll			1000-ft. Roll		
Wt. per	Sq. Ft.		Wt. per	Sq. Ft.	
Width	Roll	Per Roll	Width	Roll	Per Roll
36 in.	13 lbs.	300	36 in.	112 lbs.	3000
42 in.	15 lbs.	350	42 in.	130 lbs.	3500
48 in.	17 lbs.	400	48 in.	150 lbs.	4000
PRICES PER SQUARE FOOT					
300 to 2999 sq. ft. . . . .			1000-ft. rolls		
			3000 to 23,999 sq. ft. . . . .		
			24,000 sq. ft. and up. . . . .		



"Mylar" (5 mil W-2) is ideal for cold frame sash. Frames are very lightweight with no glass to break.

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INC.  
WEST CHICAGO  
ILLINOIS

3% discount for cash with order. Minimum order, 1 roll, F.O.B. West Chicago.

NOTE: Rolls of different lengths, types and widths may be combined for total sq. ft. price.

# GROWERS OPPORTUNITY PAGE

Only 25¢ a word for one-time insertion; 20¢ a word per month for two-time insertion; 15¢ a word per month for four times or more. CASH WITH ORDER. Count each initial and whole number as one word. Copy must be in the 15th of the second month preceding date of issue. You can use our companion publication, AMERICAN FRUIT GROWER, in combination with AMERICAN VEGETABLE GROWER, for only 10¢ a word more.

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WANT EXTRA MONEY? TAKE BIG PROFIT orders in your spare time accepting subscriptions for AMERICAN VEGETABLE GROWER. Send for free credentials and tested-method sales kit. No obligation. Write today. AMERICAN VEGETABLE GROWER, Box 109, Willoughby, Ohio.

## BEES

BEES INCREASE SEED AND FRUIT yields, require little attention. Big profits. Sting-proof equipment. Factory prices save 25%. Free advice from experienced bee men. Free catalogue. WALTER T. KELLEY CO., Clarkson, Kentucky.

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### STRAWBERRY PLANTS

Superb new varieties—Dixieland, Pocahontas, Armore, Empire, Tennessee, Beauty. Best standard kinds—Premier, Catskill, Sparkle, Blakemore, Robinson, Fairfax. Wonderfully productive plants. Berry Book Free. Write today.

W. F. ALLEN COMPANY  
114 Pine Street Salisbury, Maryland

THE HOW-TO-BOOK ON STRAWBERRIES. The layman's primer, the professional's reference and everyone's factual guide to more and better strawberries. \$1.50. AMERICAN VEGETABLE GROWER, Box 107, Willoughby, Ohio.

DRUG MEDICINES DISAPPOINT, DISILLUSION. Why defeat nature's spontaneous recovery efforts? New 25¢ book, MEDICINES OF NATURE describes seven universal curatives freely available everywhere. M-PRESS, Coalmont 143, Tennessee.

BERRY BOOK: "THIRTY YEARS OF BERRIES" Raspberries and Strawberries. 84 pages. Price \$1.00. P.O. ROY TURNER, 1525 S. Livingston St., Peoria, Ill.

## BRUSH & LOW KILLERS

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FOR SALE: NEW CERTIFIED BLIGHT RESISTANT seed potatoes: Merrimac, Saco, Huron, Plymouth, Kennebec and 133's. THOMPSON FARMS, Clymer, New York

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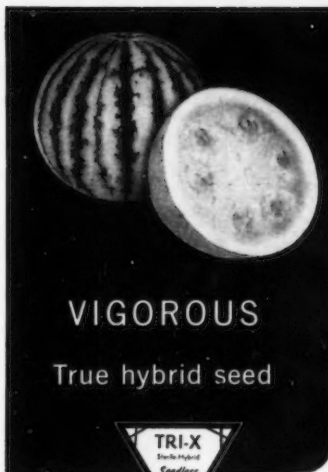
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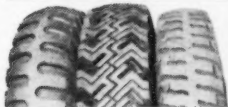
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All Sound—Ready to Run

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PERFECT REPLACEMENTS FOR 16" WAGON - TRUCK TIRES

WILL FIT DROP CENTER OR TRUCK WHEELS

36" used sprayer tires \$12.50

8 3/8" hi x 12" wide 6 1/8" dia.

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DEALERS WANTED



## The Chain Store Puzzle

AT a recent national grower meeting there was evidence of considerable worry about the chains. The question on everyone's lips was—will growers be able to deal with chain stores on fair terms?

Some of the questions asked had to do with chain store pricing policies. Do chains want to sell a high volume at a low price or a smaller volume at a higher markup? And what about loss leaders? How can growers protect themselves against this price-destroying merchandising tactic? What about consumer unit packaging? Will the chain run its own packaging warehouse, or will the grower retain control?

And how about the most important question of all—price? Will the chains, with their tremendous purchasing power, be able to dictate the price to the grower? What can the grower do to gain some measure of control over the price he receives?

Running through many of the conversations was an unspoken fear. The fear was of a boycott of the grower's perishable product if demands are pressed too strongly. Because of this, some growers are loath to express their sentiments publicly.

These thoughts are passing through the minds of all growers like a crazy symphony, and there doesn't seem to be any answers.

One reason for the lack of answers and the lack of leadership may be that growers are fundamentally and psychologically producers. Few are true dyed-in-the-wool salesmen.

Growers are more and more organizing themselves into groups and hiring salesmen to do the selling job. Nevertheless, the production philosophy permeates the group thinking.

This is a situation that should be carefully examined because the important struggle today is for control of the marketing system. Under marketing methods of the past decade there were many handlers, merchants, and buyers. It was virtually impossible for any one individual or group to obtain sufficient control to affect the price.

However, we now see changes in marketing procedure that are putting many small middlemen out of business. With fewer and fewer handlers involved, the marketing system is becoming vulnerable to monopolistic

control from the retailer back to the producer.

What course can be followed? It would be wise to resolve that no step in the marketing system will be given up without a fight. Growers must retain control over packaging.

It stands to reason that the chain will not package as carefully or as well as the grower can. The chain-controlled packaging plant will not study trends for a particular crop as thoroughly and as seriously as the grower producing that crop. Nor will the chain understand production problems or variety problems which can have an important effect on packaging procedure. Finally, to give up packaging is to surrender considerable management control.

To combat chain buying power and pricing policies, it is wise to study how the giant food and soap manufacturers deal with chain stores. Through advertising and promotion direct to the consumer, they can pretty well dictate how, when, where, and at what price the chains will sell their products. For instance, chains get a very small mark-up on soap, but are forced to stock soap because the housewife demands it.

Growers who can identify their product and advertise direct to the consumer are indeed fortunate.

These are some notable examples—Sunkist oranges, Idaho potatoes, Washington Delicious apples.

The point is that there are ways

and means to adapt to changed marketing conditions and even profit by them. Growers must exert leadership in marketing. There is not a cent to be made in producing—the money is in selling.

Too many of our vegetables are marketed under the philosophy of we'll produce it, let someone else sell

### QUOTE-OF-THE-MONTH

**All the flowers of all the tomorrows are in the seeds of today.**

—Chinese Proverb

it. To continue this philosophy is dangerous. There are strong, capable companies with which growers must deal.

It will take foresight and a planned program to be able to meet these big buyers on an equal footing.

## Congratulations!

WE can think of no better way to mark the 25th anniversary of National Junior Vegetable Growers Association than to cite the record of Roger Mumma, Barhousville, W. Va., national winner. Roger, 19, made his winning record growing sweet corn. He sold \$1,950.95 worth, less \$936.15 for costs, leaving him a tidy profit of \$1,014.80.

Roger learned that improvement of soil fertility is most important in sweet corn production. He learned to grow cover crops, apply manure and other fertilizers, and to sidedress.

With marketing, Roger found that early sweet corn is a luxury item and brings high prices as well as offering the advantage of being able to make contacts with chain store outlets.

In 1960, Roger will give up the chain stores and will market direct to the consumer. He believes this will give him a greater total return.

Multiply Roger's experience by the hundreds of other boys and girls and you get some idea of the opportunities, experience, and education offered to the younger generation by NJVGA.

To NJVGA on its 25th anniversary, we offer our congratulations. May it continue to grow and prosper in the next 25 years.

### Coming Next Month

- The Knotty Farm Labor Problem
- Leckler's Vanishing Roadside Sales
- Texas Extends Tomato Season with Plastic
- How Grower Jeno Paulucci Became a Self-Made Millionaire
- Fertility Practices at Seabrook Farms

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